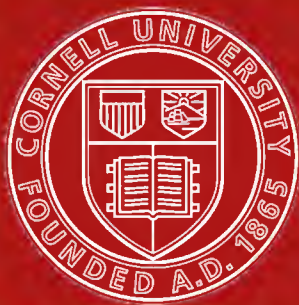


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BARNES,
Outbuildings
AND
FENCES
((BY))

GEO. E. HARNEY, Architect,
Newburgh & Cold Spring, N. Y.

((NEW YORK))
((Geo. E. Woodward.))

Designs, Plans & Details Engraved & printed by KORFF BROS. New York.

S T A B L E S,
O U T B U I L D I N G S
AND
F E N C E S.

ILLUSTRATED WITH A SERIES OF 120 ORIGINAL DESIGNS
AND PLANS, WITH DESCRIPTIVE MATTER.

BY
G E O R G E E. H A R N E Y,
ARCHITECT,
COLD SPRING, N. Y., AND NEWBURGH, N. Y.

NEW YORK:
GEO. E. WOODWARD.

Entered according to an Act of Congress in the year 1870, by

GEORGE E. HARNEY,

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P R E F A C E .

IN the following pages will be found a series of designs for the different kinds of out-buildings required on farms and country places generally, and on village and suburban lots, besides a number of suggestions for gateways and fences, and for rustic structures of several kinds.

The work is divided into three sections.

Section First comprises sixteen designs for stables of various style and accommodation, commencing with a cheap building for a small village lot, and concluding with an expensive structure for a large and complete country place.

Some of the designs are for wood construction, some for brick, and one for stone, but in any design the material may of course be varied to suit the fancy of the builder.

In *Section Second* will be found illustrations of various kinds of buildings suitable for farming purposes, besides a number of designs for the smaller kinds of buildings which are adjuncts to the houses on suburban and village lots — such as wood-houses, tool-houses, workshops, poultry-houses, an ice-house, a Swiss Chalet, and a design for a small billiard-house. There are two sets of complete farm buildings in this section, one of which has been erected near Cold Spring, N. Y. The other set was designed for erection in Lexington, Ky., but, so far as we know, has never been carried into execution.

Section Third is devoted principally to enclosures; and we here present designs for rustic and finished fences and gateways, covered gateways, carriage gates, a design for a gate-house and gate combined, and several other rustic structures — such as stables, summer-houses, well-houses, etc.

It has been our aim to present as great a variety of designs as possible, and, although it would be impossible to suit all tastes as to design, and all requirements as to accommodation, in a work of this kind, yet it is hoped that, as most of them have been made to suit cases occurring in the ordinary run of professional practice, they will meet the general demands of the market.

No estimates are given. Prices in these times vary so much in different sections of the country, and in the same sections even, at different times, that it would not be possible to give actual and accurate figures suited to all. Even in the same locality, six months may make a complete change in the prices of labor and materials, and estimates of cost given now would only serve to mislead instead of aiding the person desiring to build. Therefore, it has been thought advisable to omit them, saying only, by way of a hint, that, generally speaking, a plain wooden stable large enough to accommodate one horse and a couple of carriages, would cost about \$400; one for two horses, \$500 to \$600, and for three horses, \$800 to \$900. A brick stable would cost about one-third more than one of the same design built of wood; and stone, three-quarters more, or nearly double.

STABLES, OUTBUILDINGS, AND FENCES.

SECTION FIRST—STABLES.

SECTION SECOND—FARM BARNS AND OUTBUILDINGS.

SECTION THIRD—GATES, GATEWAYS AND FENCES.

SECTION FIRST.



STABLES.

SECTION FIRST.

Plate No. 1.

A CHEAP STABLE FOR TWO HORSES.

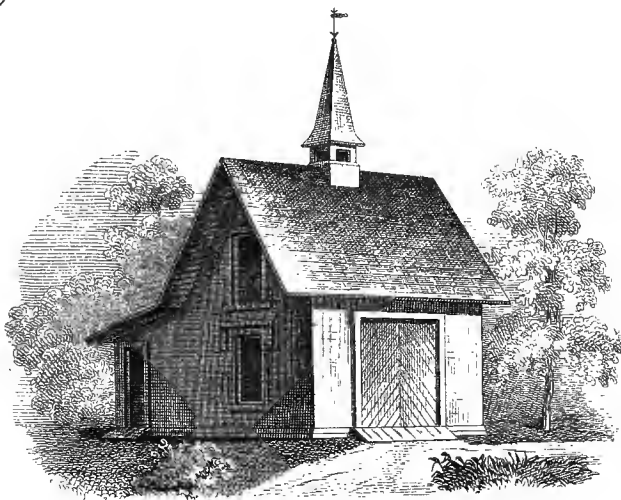
COMMENCING with the cheapest and simplest, we offer this design for a small wooden stable.

The main portion of the building is eighteen feet square, and one story and a half high. In the first story is the carriage-room, occupying the whole of the space, and over it is the loft for storing hay and grain. The main carriage-doors are seen in the perspective view, and are made to swing outward, being hung on heavy wrought iron strap hinges, and fastened by the ordinary swinging bar and hook on the inside. The hay loft is filled through the door in the end directly over the carriage-room window. At the rear of this main portion is a one-story lean-to, the highest part of its roof being on a line with the plate of the main roof, which is about three feet above the loft floor. The lean-to roof slants from this to the rear, where it is about nine feet high. This rear part is sixteen feet by eighteen, and has two stalls, each five feet by nine. There is a passage at the back of the stalls of seven feet in width, besides another five feet wide, leading to the carriage-room. The feed is all kept in the loft, and is mixed there, and distributed to the stalls by shoots running down to the mangers. A ventilating shaft also runs up to the ridge and discharges into the ventilator seen in the picture. The stairway to the loft is at the side of the right hand stall, and underneath is a harness-closet opening from the carriage-room. The stalls are lighted by two twelve-light windows in the rear wall, and, besides these, there are two doors in this part, one leading to the stable-yard on the left, and the other to the manure-yard, on the right of the plan. The manure-yard is twelve feet by eighteen, and is designed to be surrounded by a tight board fence six feet high, with a wide gateway in some convenient place, for loading its contents into a wagon when it is to be cleaned out.

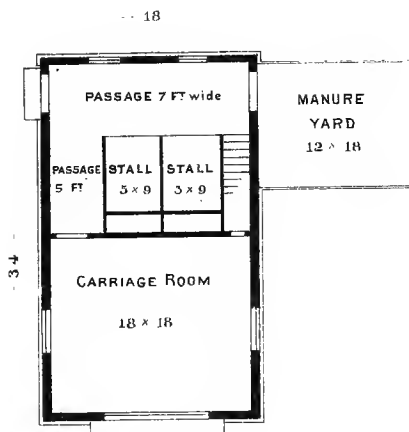
The construction of this building is very simple. The walls may be studded up and clapboarded, or boarded up vertically and battened. The roof is shingled, and the eaves project two feet all around. The floors are of two-inch plank, and the foundations of rough stone, commencing about three feet below the surface of the ground, and stopping just above the grade line. The base, corner boards and window and door trimmings are of pine, inch and a quarter thick and five inches wide, and the doors are of two thicknesses screwed together.

An improvement on this plan would be to put the main barn doors where the window is, in the gable end, and then build a lean-to on the nearest side, exactly similar to the one on the other side. Leave the front open, and use the space as a shed to drive under and tie a horse in at any time. The building would then be perfectly symmetrical, and very complete for so small a stable.

A CHEAP STABLE FOR TWO HORSES.



PERSPECTIVE VIEW



PLAN

5-6 x 11

SECTION FIRST.

Plate No. 2.

A CHEAP STABLE FOR TWO HORSES AND A COW.

THIS design, somewhat larger than No. 1, was built a few years ago for a gentleman in Massachusetts, at a cost of less than five hundred dollars, and is a fair sample of the accommodation usually required for an ordinary New England village stable.

It measures twenty-five feet by thirty-two, is built of wood and covered in the vertical and battened manner, and has a shingled roof, surmounted by a ventilator.

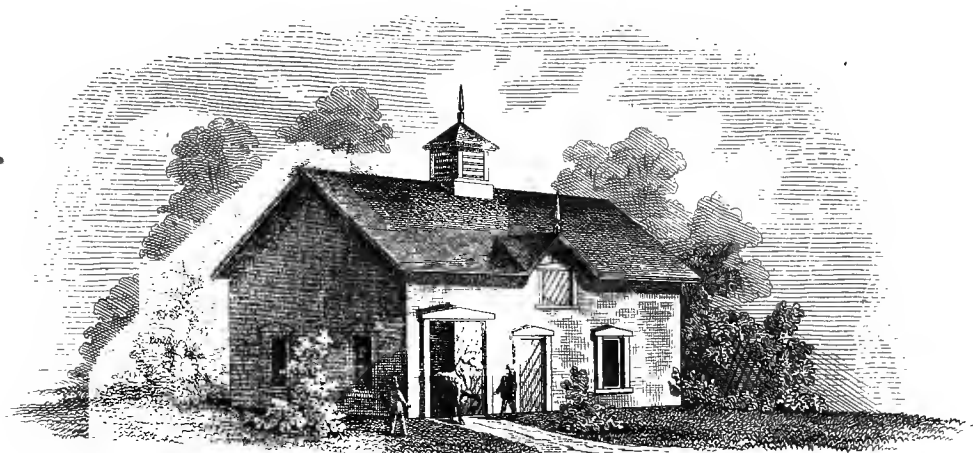
The treatment of the exterior could not well be more simple, as regard was had to the strictest economy in every particular.

There is no base, but the ends of the boards project down over the face of the brick underpinning an inch or two, to cover the joint of the sill, and there are sawed square off. The window and door trimmings are five inches wide, and the eaves project eighteen inches, and are bordered by a simple strip, four inches in width, nailed against the ends of the rafters, and this same finish is carried up the gables, and also around the little gable over the hay-loft door.

Inside, we find a carriage-room twelve feet by twenty-five, having a double door in the front, and a smaller one leading to the horse-stalls ; two stalls for horses, each five feet by nine ; a cow stall four feet wide ; a staircase leading up to the hay-loft, with a closet underneath it ; a large closet for harnesses, and a tool-room adjoining it ; another closet for feed, and close by it a pump, drawing water from a neighboring cistern into a trough, marked W, together with two other troughs, marked T, T, for mixing fodder, etc.

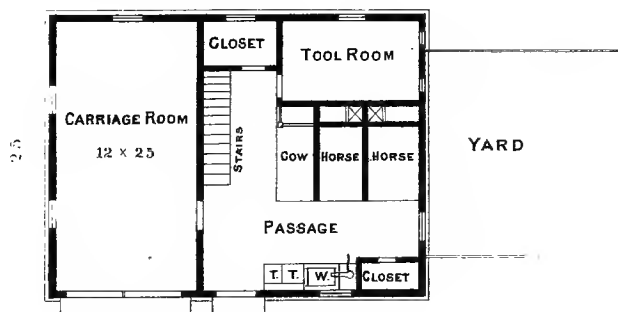
The second floor is for storing hay, which is supplied to the troughs by means of shoots. A large ventilating shaft terminates in the ventilator, seen in the perspective view. The manure-yard is on the right, and is enclosed by a high fence, so overrun by Virginia creeper that it is hardly seen. And here let us remark, that every stable, however small or however situated—but particularly if it be on a village lot—should have its manure-yard always enclosed by a fence or screen of some kind. A manure heap is never a pretty thing to look at, but a screen can always be made attractive, especially if covered with vines or flanked by evergreens ; still better if it were roofed over to prevent the manure being washed off by the rains, the roof being supported on posts and braced up with strong and simple brackets, and the eaves made to project two or three feet. This sort of an addition would not cost much, but would add considerably to the value of the building.

A CHEAP STABLE FOR TWO HORSES. AND A COW.



PERSPECTIVE VIEW

— 32 —



PLAN

SECTION FIRST.

Plate No. 3.

AN ORNAMENTAL STABLE FOR TWO HORSES.

THIS design was made for a gentleman in Newburgh, but was discarded in favor of a larger one, illustrated some pages further on.

It measures twenty by forty feet, with posts fifteen feet high from the bottom of the sill to the top of the plate. The foundations and underpinning are of stone, and the frame is covered on the outside with boarding and clapboarding up to the line of the belt-course seen in the perspective view, and above the belt the walls are boarded vertically with pine boards, and battened with two by three-inch battens, the frame here being furred out one inch to make the upper work flush with the lower. The belt course is of two-inch plank, and has a projecting beveled cap on the top to shed the water. The eaves project three and a half feet, and in the front are two breaks forming hoods over the hay-loft window and door. A large ventilator surmounts the ridge, and the roofs are covered with slates cut in patterns and put on in two colors, red and black. The exterior finish of the doors and windows is bold and heavy, and the eaves have heavy brackets of solid four-inch stuff. The doors are all double and braced on the outside, and the large ones are made to slide apart on the inside, though this is not shown on the plan on account of the smallness of the scale. The chimney starts from the harness room, where there is a hole for a stove-pipe.

The carriage-room is twenty feet by twenty-two, and nine feet high, and has a small closet in one corner.

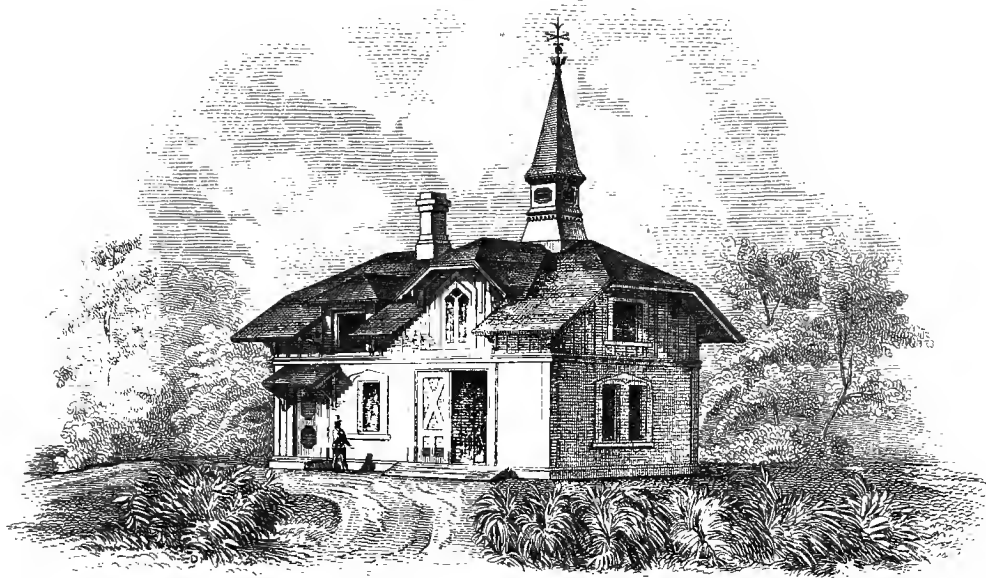
There are two stalls, each five by nine feet, with plank floors laid on locust beams. In front of each stall is a ventilating window protected by an iron grating. The harness-room is seven by nine feet, and has racks on each side for hanging harness, and cupboards for other purposes. The feed boxes are supplied by shoots from the story above, where the

SECTION FIRST—PLATE NO. 3.

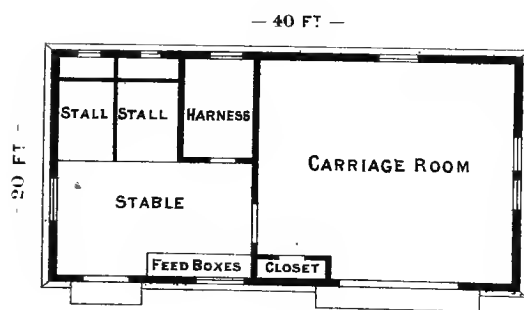
bins are, for storing grain. The interior of this stable is better finished than the two former designs. The floor is of plank deafened with three inches of deafening mortar, and the space behind the sill, and between the ends of the floor-beams where they rest on the underpinning, is filled up with bricks and mortar to the tops of the beams, in order to prevent rats working their way up. All the walls and partitions are ceiled up to the height of four feet with pine ceiling, and this space filled with bricks and mortar one foot high all around. Above the wainscoting the walls are lathed and plastered, as are also the ceilings. The windows and doors are all trimmed with four-inch inside architraves.

The second story is not finished. It is reached by means of a hanging staircase or step-ladder, which, when not in use, is pulled up to the ceiling by a rope and pulley attached for the purpose, an arrangement which saves a considerable room, and may with advantage be used in all small stables.

AN ORNAMENTAL STABLE. FOR TWO HORSES.



PERSPECTIVE VIEW



PLAN

SECTION FIRST.

Plate No. 4.

A BRICK STABLE FOR A HORSE AND COW.

GENERALLY speaking, we consider bricks the very best material with which to build stables; even preferable to stone, from the fact that the walls inside, having a smoother face, may be kept cleaner, freer from cobwebs and dust deposits than stone walls; and, if built with hollow walls, more free from dampness also; though this is a matter of not so much consequence, as in this climate there will not dampness enough penetrate a solid wall of a stable to cause any injury to the horses. It is very desirable, however, to have a stable rat-proof; and it may be made thoroughly so by commencing with a stone foundation—the bottom course of which is broader than the stone-work above it—laid in half cement mortar up to the grade line, and then building the brick wall upon that, filling in all the space enclosed by the walls with concrete up to the line of the top of the water table, and then paving it with large stones firmly bedded, which shall form the floor of the stable. On the outside there should be a stone water-table eight or ten inches high, projecting one or two inches outside of the main walls above, and having the upper surface of the projection beveled off to shed the water; and just above the water-table it would be well to have a course of slate built in the full thickness of the walls, which will prevent any dampness rising up into them from the ground by capillary attraction.

Above the water-table the walls should be built up with a *smooth face* and with *close, neatly struck joints inside as well as out*, so as to present a clean, even surface, which should always be kept painted or washed with a lime or cement wash. Above the wall-plate the space should be filled in to the under side of the roof-boards.

The ceilings over the main story are usually left with the second story floor beams exposed to view, but we think it very desirable that they should be lathed and plastered; partially, for the sake of the wholesome, cleanly appearance a white ceiling always has, and for the sake of keeping away cobwebs, which, when beams are exposed, always get lodgment—and partially to prevent foul air rising from the room below and tainting the hay in the loft. We would also trim the doors and windows inside with architraves, even if they are only narrow strips of the cheapest stuff.

These two last hints, by the way, are just as valuable for a wood as for a brick stable.

It may be desirable, in some instances, to *fur out* and lath and plaster the walls of a stable, but if this is to be done, it is better to wainscot with wood up to the height of, say five feet, and to fill in the space between the walls and the wainscot, as high as practicable, with broken glass and mortar, and then to lath and plaster from the wainscot up to the ceil-

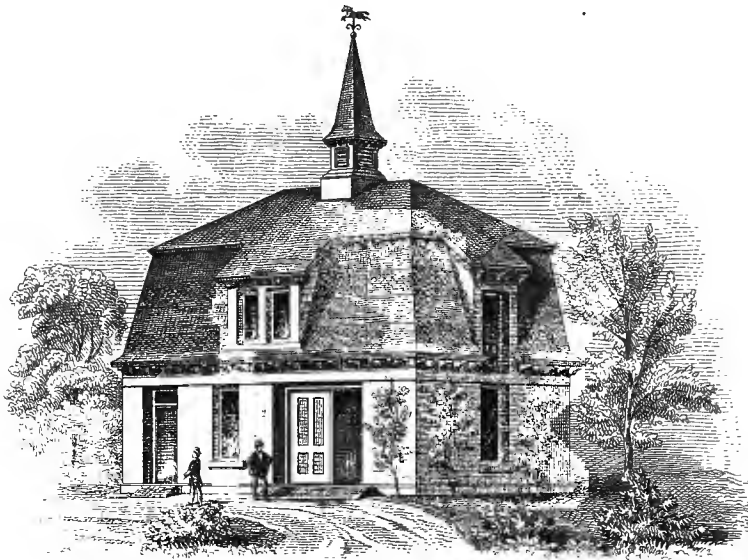
ing. A wooden stable, too, may with advantage be treated in the same way, but the space behind the wainscot being wider, may be packed with bricks and mortar, and made solid in that way.

We know it is not customary to put any finish of any kind upon the interior of stables, but we also know that in nine cases out of ten in ordinary stables, and very frequently in those of a better class, the interiors are perfectly filthy with dust which lodges on every ledge, and overhung with cobwebs which hang thick and heavy from and between the beams overhead, besides being completely *set out* with such objects of "*vertu*" as old sponges, curry-combs, and brushes; bottles of castor oil, dusters, and a dozen other things of the same sort, which are thrown after use upon any projecting beam or ledge that may happen accidentally to be wide enough to hold them.

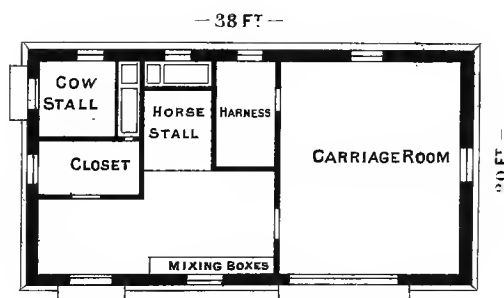
Now, certainly this sort of thing is not agreeable to the eye, and any person who has fine horses, and takes a proper pride in them, should not overlook it; yet, the groom, if questioned, will say, and truly, too, that he might be brushing all the time and he could n't keep dust and cobwebs away, so long as there are places for the latter to hang and the former to lodge; in fact, there is only one way, and that is to follow the plan of finishing off that we have suggested, covering up all such places, moreover, making everything so convenient for the most trifling operations of stable economy that there can be no inducement, or excuse even, for carelessness or neglect of any kind.

The stable which Plate No. 4 illustrates is a brick stable, constructed in accordance with the foregoing suggestions: The walls are of hard bricks, and the base or water-table is of hammered blue-stone. The tops of the doors and windows are all on a line, and on this line is a belt-course, nine inches high, of *Ohio* stone, projecting two inches from the face of the wall. Above it the wall falls back to a flush line, and twelve inches above it the eaves commence, supported on heavy blocks or brackets. The roof is slightly curved at the bottom, thence runs straight to the upper moulding, and thence to the ridge, with a pitch steep enough to slate, and the same slant continues down over the window in front, and the hay-loft door on the side of the stable. The accommodation comprises a carriage-room about seventeen feet by eighteen, a cow stall shut off from the rest of the building, and having a separate entrance from the yard, and a horse-stall, provided with patent iron fixtures. At the side of the horse-stall is a room marked harness-room, which may at any time be turned into a stall, the dimensions being already suitable. The present feed closet would then have to be divided, and a portion of it used for hanging harnesses in. The manure-yard is at the left of the building. The principal story is nine and a half feet high in the clear.

A BRICK STABLE FOR A HORSE AND COW.



PERSPECTIVE VIEW



PLAN

SECTION FIRST.

Plate No. 5.

A SIDE-HILL STABLE.

THIS design is about to be erected in Washingtonville in this State, and the site is the side of a hill, steep enough to afford a full basement on one side and a portion of the two ends, while the principal floor will be entered from the upper side of the bank, with which it is about on a level.

The basement is to be built with a twenty-inch rubble-stone wall laid in cement, and the main building is to be of frame, boarded vertically and battened.

The roof will be slated, and will have sunk gutters in the eaves, with leaders to convey the water to a cistern conveniently located for supplying water to the stalls and feed-troughs.

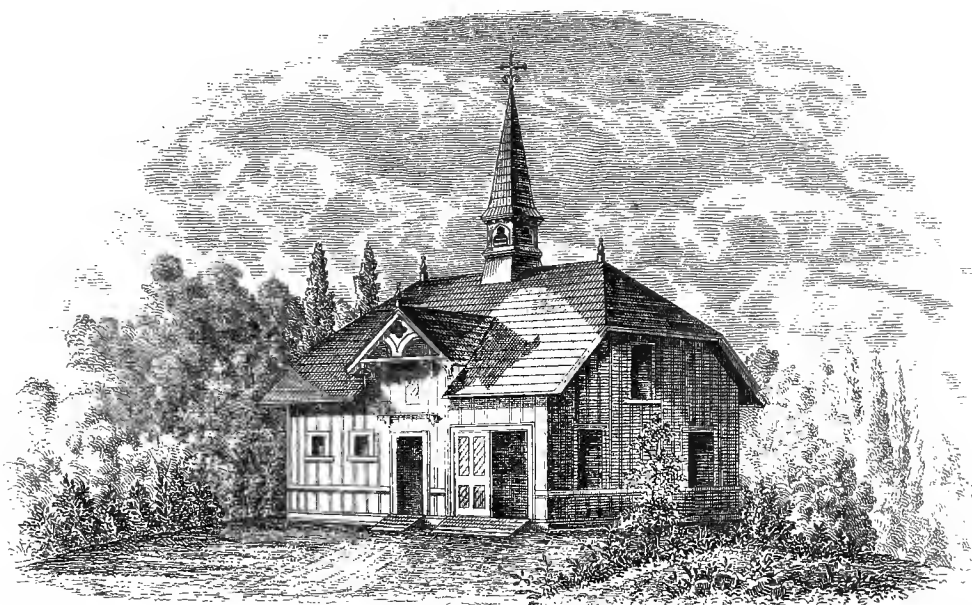
The exterior is bold, but not ornamental; the gables are cut off chiefly for the purpose of lowering the apparent height from the rear, where the ground falls off rapidly, and where it is seen from a long distance; a plank belt-course runs around on the line of the first story sills; a heavy gable covers the top of the hay-loft door, and a ventilator surmounts the ridge of the roof.

The basement plan shows a room for a cow, with a door and window in it, and stairs leading up to the main floor. Directly back of this room, and directly under the horse-stalls, is the manure cellar, communicating with an open space, marked shed, and through it with the yard in the rear. This yard will be fenced, and protected by trees and shrubbery.

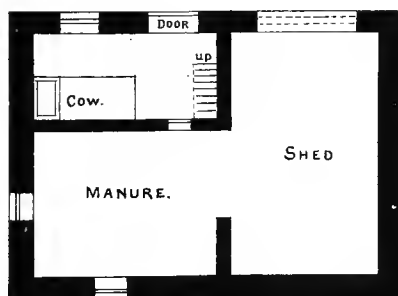
The main floor contains a carriage-room fourteen feet by twenty-four; a room eight by nine feet, for feed, etc., fitted up with plank bins lined with zinc, and having shoots and troughs for distributing and mixing the feed for the horses and cow; a harness-room five by nine, with harness-racks, saddle-bars, etc.; a staircase to the loft, and stalls for three horses, one a single and the other a double stall, provided with patent iron feed-boxes and hay-racks, and having iron lattice-work on the top of the partition.

Just behind is the trap for dropping manure into the pit below, and in the partition is a sliding door to the carriage-room. The large doors are nine feet wide and nine feet high, and the smaller doors, through which horses pass, are from three and a half to four feet wide: the other doors may be smaller—say two feet eight by six feet eight. These dimensions are generally adopted in the plans in this book; nothing smaller should ever be allowed, though in some cases the dimensions may be greater.

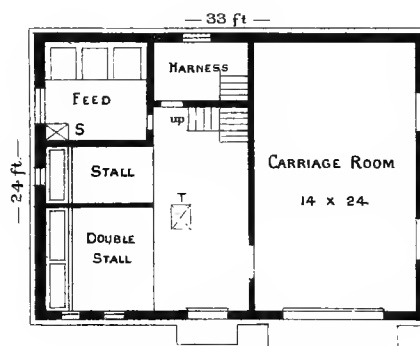
A SIDE HILL STABLE.



PERSPECTIVE VIEW.



BASEMENT PLAN.



PRINCIPAL FLOOR PLAN.

SECTION FIRST.

Plate No. 6.

A BRICK STABLE FOR TWO HORSES.

WE here have another design for a brick stable, similar in construction to Design No. 4, but having a different roof and a different arrangement of plan.

The walls are of brick, faced inside and outside; the foundations are of stone, and the floors paved and grouted; the main partition wall is of brick, and the others are of two-inch tongued and grooved plank; the walls and partitions are all painted a light gray, and the ceilings are lathed and plastered; the roof is covered with slates in two colors, purple and red.

The carriage-room is sixteen by eighteen feet, and at the rear is a lean-to of wood, arranged in this instance for storing a sleigh, but very convenient for various purposes.

There are two stalls for horses, having a patent iron gutter at the rear leading to the manure-yard, and iron mangers and hay-racks in front.

Fixtures of this kind are pretty generally adopted in modern stables of the better class, being more durable and neater than wooden ones. There are several different kinds in the market, for the different purposes connected with stable management, but they are all, we believe, equally good, and may be purchased at any of the iron stores in the large cities.

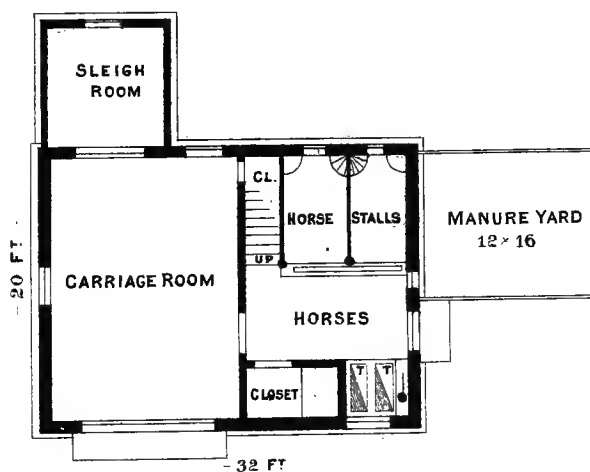
Under or near this stable should be a large cistern, receiving its supply of water from the roof, and supplying the mixing-trough and water-trough by pumps, so that at all times and in all weather there may be water for the horses always at hand. Close by is a door leading to the yard, and at the side of the stalls, is a stairway to the hay-loft. A large closet is also provided for harnesses, etc., at the left of the troughs.

The manure yard is twelve by sixteen, and is surrounded by a tight board fence six feet high, with a gate at the rear.

A BRICK STABLE FOR TWO HORSES.



PERSPECTIVE VIEW



PLAN

SECTION FIRST.

Plate No. 7.

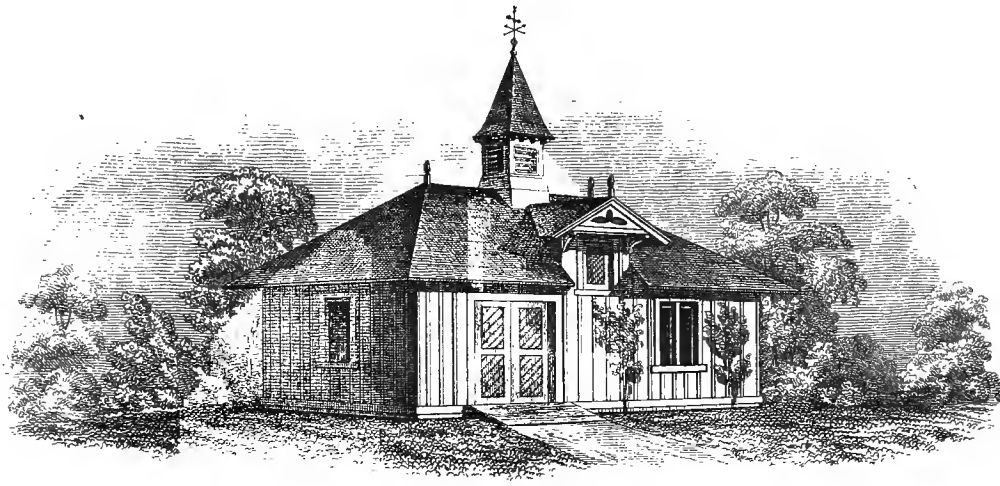
A WOODEN STABLE FOR THREE HORSES.

THIS design does not differ very much from the last in the arrangement of the plan, but it is a much cheaper structure, though considerably larger.

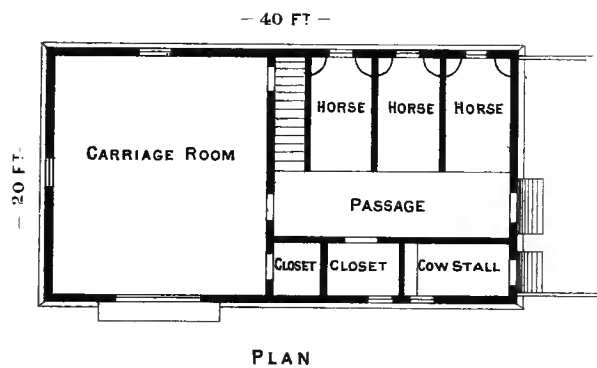
There are stalls provided for three horses, and a stairway, as in the last, at the side of the stalls, leading to the second story. The carriage-room is nineteen by twenty feet, and the harness closet opens directly from it, besides another closet under the stairs. A feed closet opens from the passage, and next to it, having a separate entrance from the enclosed yard on the right, is a cow-stall five feet wide, supplied with fodder through a small door in the partition between it and the passage behind the horse-stalls.

This stable is built of wood in the simplest manner, and covered with vertical boards and battens. The roof is hipped and covered with sawed shingles. Each stall has a ventilator near the ceiling, and there is a shaft two and a half feet square running from the ceiling to the ventilator in the roof, communicating also with the ceiling over the cow-stall. The large doors are made to slide on the inside. The inside partitions are of tongued and grooved pine boards, and the floors and stall divisions are of two-inch plank. The heel-posts at the stalls are turned out of hard wood, and firmly secured to the floor joists.

A WOODEN STABLE FOR THREE HORSES.



PERSPECTIVE VIEW



SECTION FIRST.

Plate No. 8.

A BRICK STABLE FOR THREE HORSES.

THIS is an irregular-shaped stable for three horses. It was designed for a narrow lot in the city of Newburgh, and twenty-eight feet square was all the land that could be spared for the purpose; yet three horses were to be provided for, a man's room and a carriage-room, besides proper closet room.

At the rear the ground falls away, so that beneath the principal floor is a large manure-cellar, with an entrance from a back street. The man's room, therefore, is some six feet above the ground.

There are stalls for three horses, each five feet wide and nine feet long, and provided with iron racks, mangers and water-boxes, and behind the stalls is a passage seven feet wide, with a door opening out to the yard. The harness-closet opens from the carriage-room, and another closet from the passage behind the stalls. There is a trough at T, between the two closets. The feed is all kept in the story above, and is supplied to the trough by shoots. The stairs are constructed in the same manner as in Design No. 4, swinging up against the ceiling when not in use.

The man's room is eight by ten feet, and opens directly out of the carriage-room; it has an eight-inch flue for a stove-pipe, constructed with eight-inch walls for protection against fire. The hay-loft is filled by one of the openings in the right gable over the side door.

The first story is ten feet high, with a two-inch plank floor and a lathed and plastered ceiling. The man's room is furred off and plastered all around, the rat spaces being filled in with mortar two feet above the floor.

The walls are eight inches thick, built of rough brick, and covered with a cream-colored cement wash, the recipe for making which is given below.

The exterior is somewhat ornamented, having a heavy hood over the main doorway,

and ornamental frame-work and tracery in the gables, with moulded finials rising above the peaks of the roof. The eaves project two feet, and the ventilator rises to a height of eight feet, and is surmounted by a wrought-iron finial and vane.

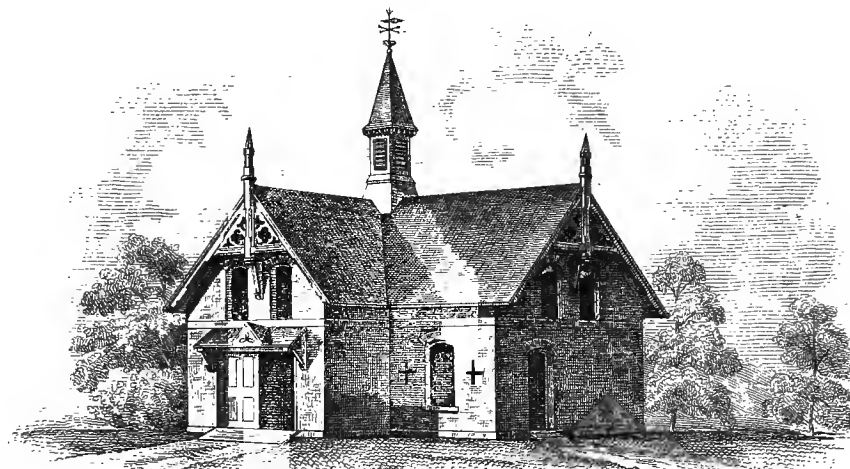
The roofs are slated with ornamental slating.

The following recipe for a cheap and durable cement wash, will be found valuable for covering any kind of brick work. It has been used by Government officers on public buildings in the Navy Yards, for the past ten years or more, and is given with great confidence as to its value :

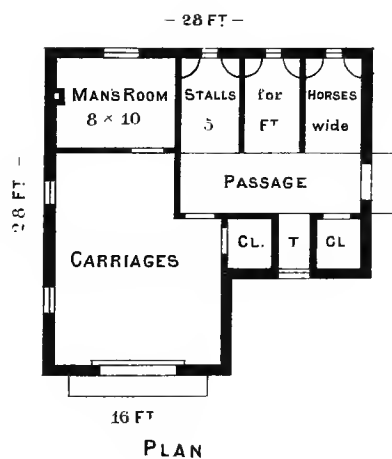
“Dissolve one pound of pulverized copperas in eight gallons of water; let it stand twenty-four hours, stirring it two or three times from the bottom; use this for slaking the lime, and thinning it to the consistency of ordinary white-wash; add hydraulic cement equal in quantity to lime used; and of clean sand, half a gallon to fifteen gallons of wash; stir it frequently to prevent the sand settling.

“The walls should be first well cleansed of dust and thoroughly wet from the rose of a watering-pot, and the wash applied immediately after, beginning at the top, laying on a coat horizontally and finishing it vertically; before leaving the work at any time, finish the course to a joint in the wall, to prevent a mark where the two join. For a gray or stone-color, add lamp black deadened with whiskey or spirits.”

A BRICK STABLE FOR THREE HORSES.



PERSPECTIVE VIEW



SECTION FIRST.

Plate No. 9.

A BRICK STABLE WITH A SHED ATTACHED.

WE have here a very complete establishment for a small country or suburban place.

The stable is designed to be built of brick, the walls laid up as described in Design No. 4, with the bluestone water-table and sandstone belt-course over the tops of the windows and doors; the walls smooth inside and painted a light blue—almost white. The floors are concreted, paved with stones, and grouted up smooth on top. The foundations are of stone commencing three and a half feet in the ground, and laid twenty inches thick in half cement mortar up to the grade-line, where the water-table is set. Above this the walls are twelve inches thick in the first story, and eight inches thick from thence to the eaves and ridge. The roofs are covered with plain black slates. The eaves project about three feet, and the front gable has a plank verge-board. All the gables are cut off, in order to reduce the apparent height of the building.

The three stalls inside are each five feet wide and nine deep, and are provided with a cast-iron gutter sunk in the pavement, and emptying into the manure-yard in the rear of the stable. There are also patent iron mangers and hay-racks, and a ventilating window to each stall.

The room for harnesses and feed is nine by fourteen feet. The harnesses are kept in cupboards with glass doors in front, occupying one side of the room, and the feed is kept in plank, metal-lined bins on the other side. The mixing-trough is close by, and also a pump.

On the right of the passage is another closet, and at the farther end stairs to the loft. The passage is eight feet wide, and has a door at each end, one opening to the front and the other to the rear yard.

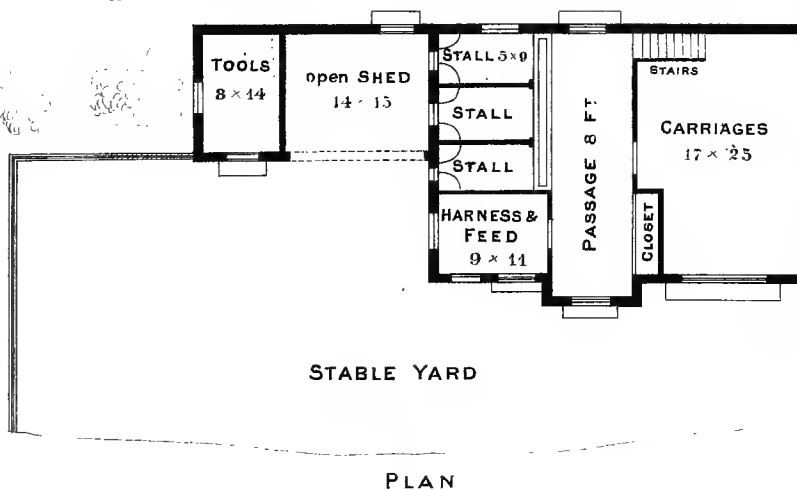
On the left of the stable is an addition, with a large tool-room on one end and an open shed at the other. For cleaning carriages, or for driving under while waiting, or for driving visitors carriages under, these sheds are a great convenience; in fact, no stable can be really complete without one or more, and the extra cost is not great.

The stable-yard is enclosed by a brick wall six feet high, capped with a bluestone cap, and having a gateway in the front with stone posts and an iron gate.

A BRICK STABLE WITH SHED ATTACHED.



PERSPECTIVE



SECTION FIRST.

Plate No. 10.

A BRICK STABLE WITH BOX-STALL.

THIS is a very simple design for a brick stable, containing accommodation for two carriage-horses and two saddle-horses. The walls are plain brick walls, with brick arches to all the window and door openings, a stone water-table, and a high pitched roof covered with plain purple slates. The inner partitions are of brick eight-inch walls; the floors are paved with stone and the ceilings lathed and plastered. The carriage-room, in the front part of the main building—facing north in this case—is eighteen feet square, accommodating two large carriages. There are three stalls, each six feet in width, with a passage eight feet wide behind them. There is a box-stall in the right wing, and adjoining it a harness and saddle-room. The feed-room is on the left, and communicates with the passage, and also with an entry in the left wing. This room is furnished with bins and troughs, and a pump for supplying water. The tool-room is six by fourteen feet; it has a flue for a stove-pipe, and is fitted up with racks and stands for gardening and carpenter's tools, and has a bench fitted up in one end.

This stable though quite plain, is complete and convenient, and the interior fittings are all of the very best kind, hard wood being used for the finish, and for the inside trimming of the windows and doors.

All the windows have ornamental iron guards, and all the outside doors are arranged so as to be unhung in summer, and their places supplied by iron gates.

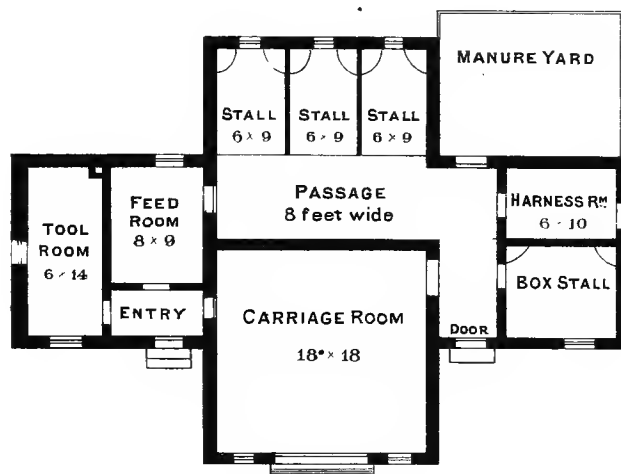
The stalls have iron fixtures and gutters, iron stall partition guards, and iron foot-posts with ornamental heads.

The manure-yard is at the rear, enclosed by a high, tight board fence, and roofed over the top.

A BRICK STABLE WITH BOX STALL.



PERSPECTIVE



PLAN

SECTION FIRST.

Plate No. 11.

A BASEMENT STABLE FOR THREE HORSES.

THIS design was made for Wm. E. Warren, Esq., of Newburgh, and the stable was erected two years ago, on his property a short distance north of the city.

The property consists of a broad open plateau, terminating on the south side in a bank which descends very abruptly from it down into a picturesque ravine, filled with thick wood and brush, and through which runs a never-failing brook.

A carriage drive enters the grounds at the southwest corner, and skirts the edge of the plateau on the south, and then curves around to the site of the house.

It was not desirable that any of the ground on the plateau should be given up to the stable; and yet it was deemed best that the stable should be somewhere near the carriage-drive already laid out; consequently, the site fixed upon was the extreme south edge of the bank, south of the drive. Thus it must of necessity be a side-hill stable, and this was agreeable because a considerable accommodation was called for with no great extent of ground to get it on. There was no objection to extending the building lengthwise—within reasonable limits—but it was impossible to get over twenty-two feet in width for the building, in addition to about ten feet for a passage-way along the south of it; all of which had to be dug out of the bank and graded over, making a level of about thirty-two feet on the line of the basement floor.

The building, then, was made twenty-two feet wide, and, including wings, ninety feet long, and the accommodation obtained has been as follows:

First, the basement faces south, and the south wall, being wholly out of ground, is of brick, while the north wall is a bank wall of stone laid in cement and two feet thick. The road to reach it by diverges from the main upper drive west of the stable, and descends by an easy grade to the lower level, running along the whole south front.

There are four stalls in this basement of ample size, having a wide passage at the rear, and another for the purpose of feeding, running along at the heads of the stalls. The fodder is all mixed in troughs for the purpose, and distributed through this passage. The entrance is through the open sheds on the right. Just at the left of the stalls is the kitchen for the

coachman, and the entry or hall, with a door to the stable, another to the shed marked "house-shed," and a stairway to the upper or main floor.

At the left of this shed is a small room, marked "office," approached by a separate stairway from the upper level, and finished off in a plain manner for a business room.

Above the basement the building is of frame, boarded and battened, plain, yet having broad eaves and hoods over the windows and doors. The carriage-room is twenty-two by twenty-five feet, and nine and a half feet high.

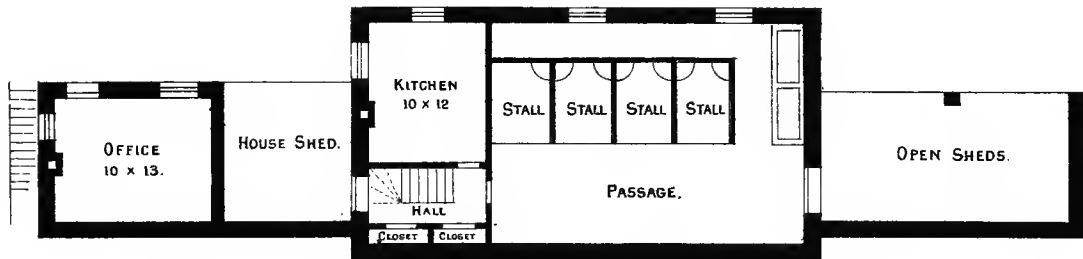
The stairs from the basement terminate in an entry on the principal floor, and in this entry is the front door of the dwelling-house, close by which is a large closet. The living-room is thirteen by fifteen feet, and opening out of it are two bed-rooms, one eight feet square and the other eleven by thirteen feet. Still farther towards the east is another room, marked "bed-room," but used for other purposes, having a door direct to the yard.

In the western wing is a workshop, fitted up with bench and other conveniences, and adjoining is a poultry-room, used in connection with a part of the shed immediately below it. All the living-rooms are finished off, lathed and plastered, but the rest of the inside of the building is at present unfinished.

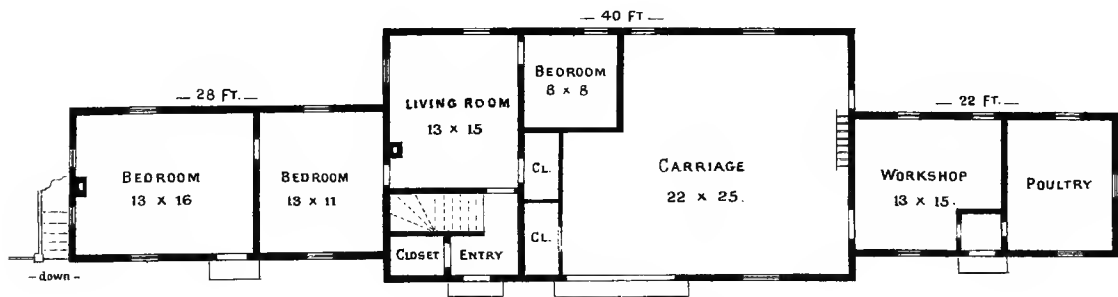
A BASEMENT STABLE FOR FOUR HORSES.



PERSPECTIVE



BASEMENT.



PRINCIPAL FLOOR.

SECTION FIRST.

Plate No. 12.

AN ORNAMENTAL STABLE FOR FOUR HORSES.

THIS is a design for a brick and stone stable, planned with sufficient accommodation for four horses.

In the general appearance of its exterior it is not unlike some of the more modern French stables, though it is much more simple in its details. It is designed to be built of brick with stone trimmings. The lower story, from the water-table to the belt-course, has a twelve-inch wall, the outside face of which is laid with pressed front bricks, and above that—to the eaves, the walls are eight inches thick (setting back three inches from the face of the lower wall) of common hard brick, covered with a cement-wash or with a coat of cement, tinted. The quoins or corners, are of pressed brick laid flush with the lower wall. The water-table, belt-course, and arches over the windows and doors, are of Ohio or New Jersey stone, alternately rough and finished.

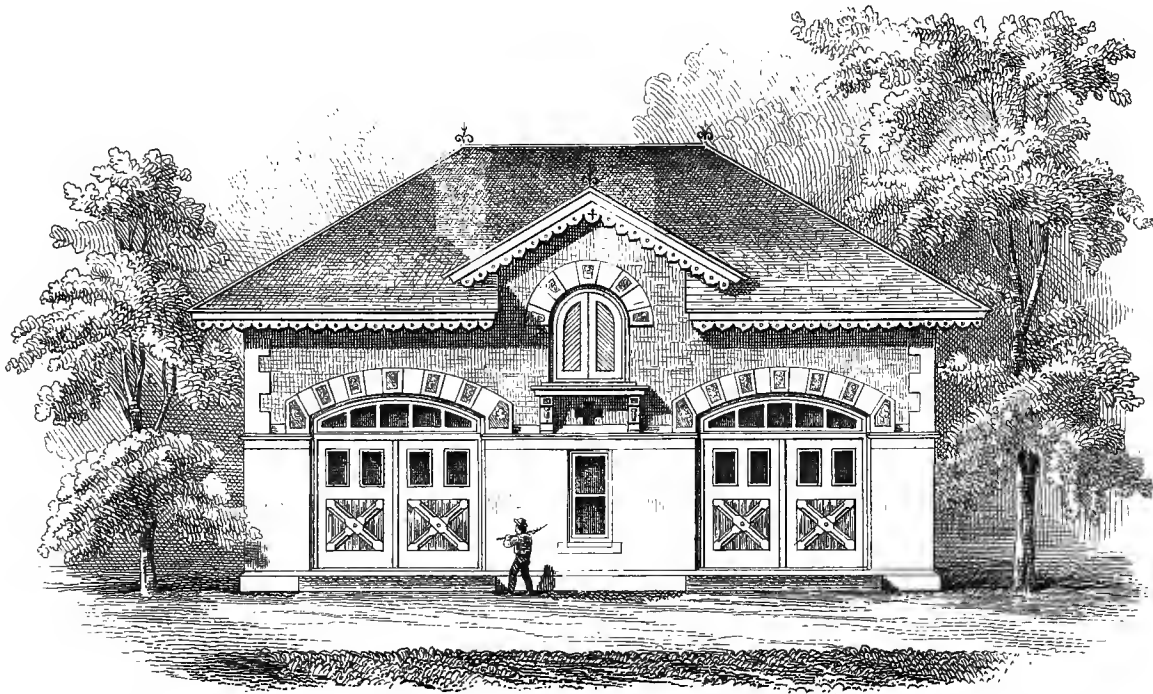
Another and very effective method of construction would be, to build the lower wall of rubble-stone instead of using pressed brick, and the second story of pressed brick instead of common brick, making all the corners and arches of stone partially dressed; this would give a very good variety of color and afford a very picturesque building, but the cost would be considerably greater than the first method.

The roof is hipped and covered with slates, and the eaves project four feet beyond the walls, and are ornamented by a drapery or verge-board of simple and effective pattern. The large doors in front are made very heavy, and the upper panels are glazed with rough plate-glass. They have also sashes over them for light and ventilation. The second story is lighted by a large window in the rear—in a gable similar to that in front—and by small round windows in the two ends, all of which are made to swing open at will. Ventilation is also afforded by openings all around the walls, and just under the eaves. The floors are all paved, the walls inside are painted, and the ceilings are lathed and plastered, the general construction being similar to the brick stables heretofore described.

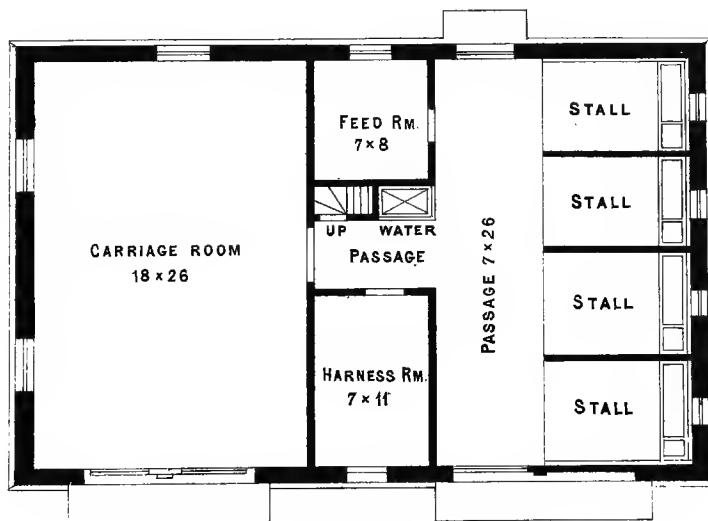
The accommodation is as follows :

One half of the large door on the right of the stable (the other half of which is simply a panel made like the door for symmetry) opens into the stable-room, where we find four stalls, each six feet wide and nine feet long, fitted up with iron fixtures and partitions, and having a gutter behind them discharging into a manure-pit behind the stable. Each stall has a ventilating window in the front wall near the ceiling. The passage behind the horses is seven feet wide, and has a door four feet wide at either end. The harness-room is seven by eleven feet, and the feed-room is seven by eight feet, and between the two is the passage to the carriage-room. A water-trough is in a convenient place, and over it is the stairway to the hay-loft. The carriage-room is eighteen by twenty-six feet. The height of this story is eleven feet in the clear, and the walls are eighteen feet high above the base.

AN ORNAMENTAL STABLE FOR FOUR HORSES.



ELEVATION



PLAN
12 FEET ONE INCH

SECTION FIRST.

Plates No. 13 and 14.

A LARGE STABLE OF FRENCH DESIGN.

THIS is another design for a stable in the modern French style, larger and more expensive than the foregoing one, and having the characteristic Mansard roof, besides other features common to French Architecture.

It contains the requisite accommodation for six horses, and consists of a central portion forty feet square, and two wings, each eighteen feet by thirty-three. In the wing on the left are stalls for five horses, fitted up in the same manner as those in Design No. 12. Behind them is a passage-way eight feet in width, with a door at each end. The feed-room opens out of it on the right, and from this feed-room a stair-way rises to the hay-loft. The water-trough is under the stair-way. The harness-room is of ample size, and has a range of closets for harnesses, etc., extending all along one side. The carriage-room is very large, and has large doors in the front and at the rear, the latter opening into a covered shed, which is not shown in the plan, but which extends along the entire rear of the central building.

In the right wing there is a sleeping-room for a man, besides a large store-room and a box-stall. The latter is entered from the yard as well as from the entry leading to the carriage-room. In the second story of this wing a couple of good rooms might be finished off, if occasion required, to be used as bed-rooms.

The whole of this wing might be used as a residence for a coachman's family, in which case the lower story would be divided into parlor and living-room — the living-room occupying the place marked "man's room," and the parlor taking the place of the present box-stall and store-room, and between the two a staircase and closets may be got.

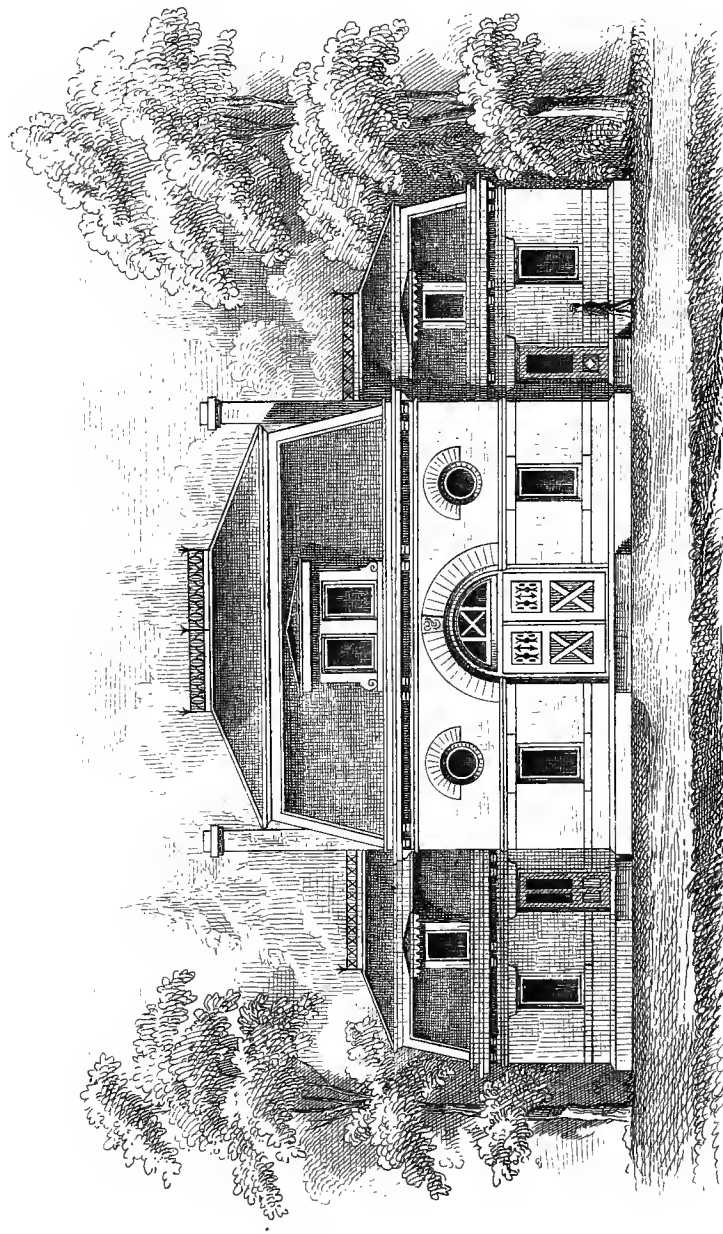
There would have to be a door from the living-room to the yard at the rear, and a cellar under the whole wing. The front door and the door to the carriage-room, would be as they are now.

This building is designed to be built of brick and trimmed with stone. The outside

SECTION FIRST—PLATES 13 AND 14.

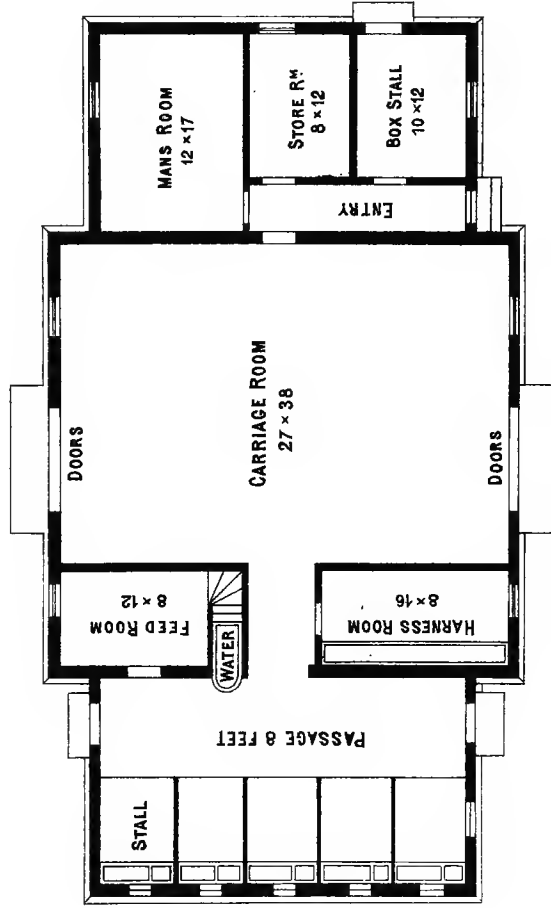
facing should be either pressed brick or the best quality of hard brick, selected for smoothness of surface and evenness of tint, and should be laid with close, neatly struck joints in dark-colored mortar. The walls of the main building are twelve inches thick, and of the wings eight inches, and the partitions between the main building and the wings are also of brick. The water-table is of blue stone, beveled off a couple of inches to shed the water. All the rest of the stone-work is of Ohio stone or Nova Scotia stone ; and this comprises the window-sills and the belt-course connecting them, the moulded belt-course which runs around the building on the line of the window and door-heads, and the stones which form the arches of the large doors and round windows. The roofs are slated with plain purple or black slates, and are surmounted by neat iron crestings. There are smoke-flues in the harness-room, the feed-room, and the man's room. The general construction and interior finish are like the last design.

A LARGE STABLE OF FRENCH DESIGN.



ELEVATION

A LARGE STABLE OF FRENCH DESIGN.



PLAN
16 FEET to one INCH

SECTION FIRST.

Plate No. 15.

A STONE STABLE.

THIS design was made for a gentleman in Garrison's, some time since, and is the only example of a stone stable that we have introduced into these pages.

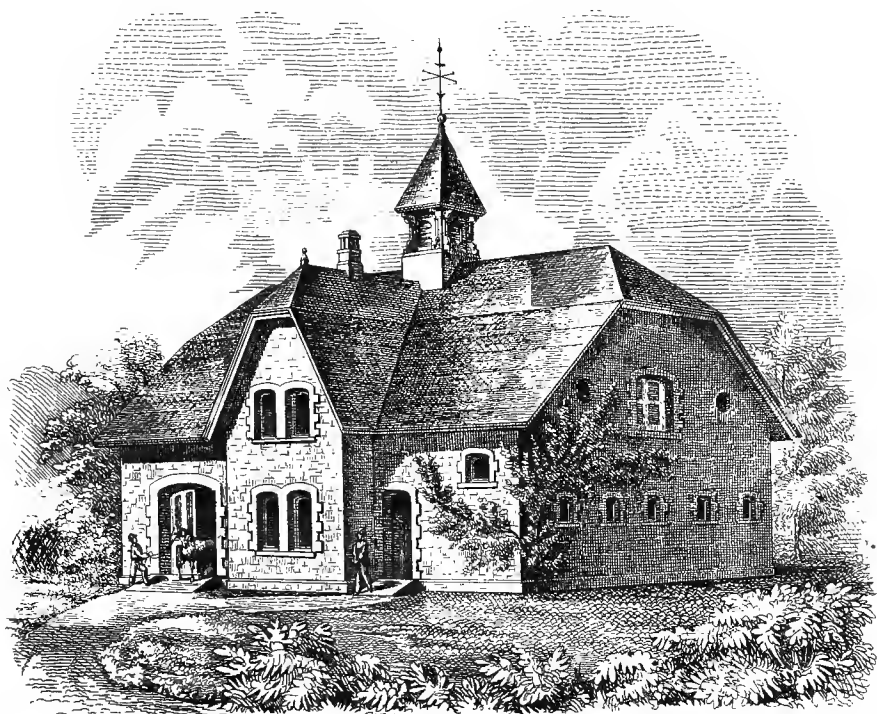
The walls are of rough gray rubble-stone, twenty inches thick, laid in cement mortar, and trimmed around all the windows and door with bricks. The roofs are steep, and covered with plain purple slates. The eaves project about two feet, and are cased up, having gutters all around, from which the water of the roof is taken by tin leaders to a couple of large brick cisterns under ground.

The exterior is severely plain though very substantial. The windows all have iron guards, and the doors are of double thickness, made to slide.

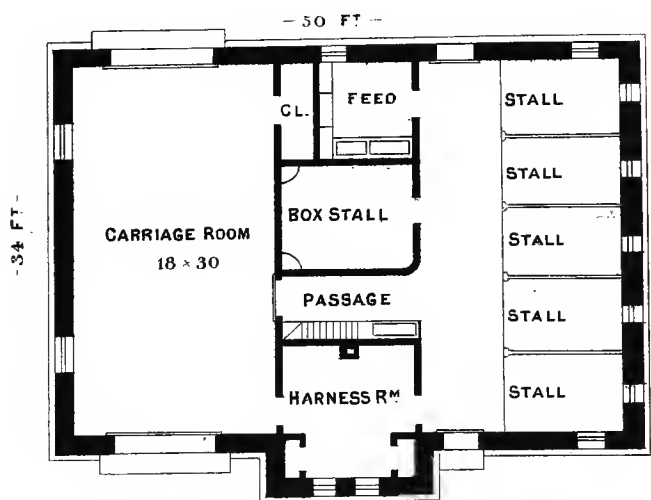
There are five stalls for horses, each measuring six feet by nine, and fitted up with iron fixtures complete. Each stall has a ventilating window in front, next the ceiling. The passage behind the stalls is seven feet wide, and has a door at either end ; the one at the rear opening into the manure-yard.

At the left of the entrance, and in the front part of the building, is a harness-room eleven feet square, provided with a flue for a stove-pipe, cupboards, etc., for harnesses, and two closets for other purposes. It communicates with both the horse and the carriage-room. The passage connecting the stall-room with the carriage-room is six feet wide, and in it are stairs to the second story, and a large trough, supplied with water from the cisterns beneath. The box-stall is nine by twelve feet. The feed-room is supplied from the loft above, and has all the conveniences for mixing and distributing fodder to the horses. The carriage-room is eighteen by thirty feet, has large sliding-doors at either end, and a closet on the right. The hay-loft is filled by means of two doors, one in each main gable.

A STONE STABLE



PERSPECTIVE VIEW



PLAN

Scale 16 Feet to one Inch

SECTION FIRST.

Plates No. 16 and 17.

A COMPLETE STABLE WITH LODGE AND SHEDS.

THIS is a very complete and convenient establishment for a country place of considerable size, and comprises in its plan, a house for a coachman, sheds for wood, etc., a stable for two cows, rooms for tools and storage purposes, and stable accommodation for four horses, with feed-room, harness-room, etc., attached.

The buildings are all connected together, and are partially enclosed by an eight-inch brick wall, forming a large stable-yard, which is supposed to face towards the south. This wall is omitted in the picture for the purpose of better showing the design, but its position is plainly defined on the plan — Plate No. 17.

The small house for the coachman is at one extremity of the enclosure, and is approached by a path branching from the main drive near the gate-way to the yard. It is built of brick — an eight-inch wall — and has a slated roof. There are three rooms in the first story and a low garret over them, which is reached by a step-ladder from the entry. The entry opens from the stoop and into the three rooms. The parlor is twelve feet square, and has a square bay window projecting from one side. The kitchen is of the same size, and has a door out to the long shed which connects it with the stable. The bed-room is eight feet square, and communicates with the kitchen and with the entry. It has a large closet opening from it, and is amply lighted by the window in the front gable.

The open shed is thirty-two feet long, and the roof, which slants to the rear, is supported on posts in front and an eight-inch brick wall at the back, which wall also forms a part of the boundary of the yard.

The main stable measures thirty by fifty feet. The carriage-room is twenty by twenty-four feet, and communicates directly with another open shed. There is a small room eight feet by twelve, for cleaning harness, etc., in, having a chimney in one corner, and, adjoining it, a harness-room of the same size.

There are stalls for four horses arranged on this plan, but by changing their position and the position of the feed-room, making the horses face the rear wall instead of the side,

SECTION FIRST—PLATES 16 AND 17.

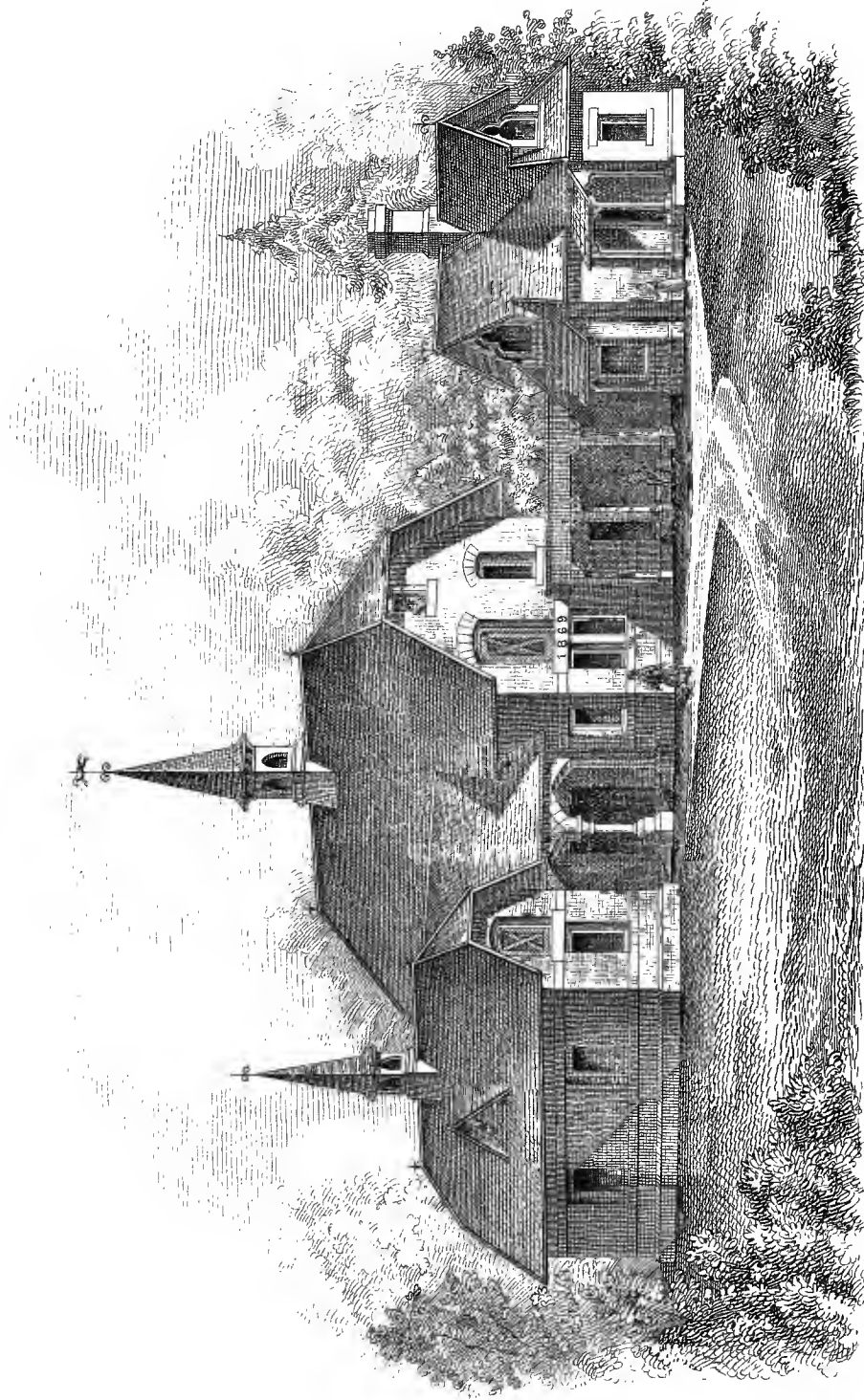
one or two additional stalls may be got. These stalls are five feet by nine, and are supposed to have all the modern iron fixtures; they face towards the feed-room, and are supplied through small doors in the partition between it and them. The manure receptacle will be behind the stable.

At the left of the stable is a room with two cow-stalls in it, having a door from the horse-room, and another opening out to the fields behind. This room is eight by thirteen feet, and the stalls are eight by seven-and-a-half. Next to it is the tool-room, which is eight by eleven, opening directly from the shed.

At the left of the shed is the store-room, and next to it another room of the same dimensions for extra carriages or sleighs, both of which are entered from the open shed. This shed is twenty-four feet by twenty-five, and is, in fact, a central space from which all the different parts of the stable are reached, and in which horses are harnessed and cleaned, carriages washed, etc.

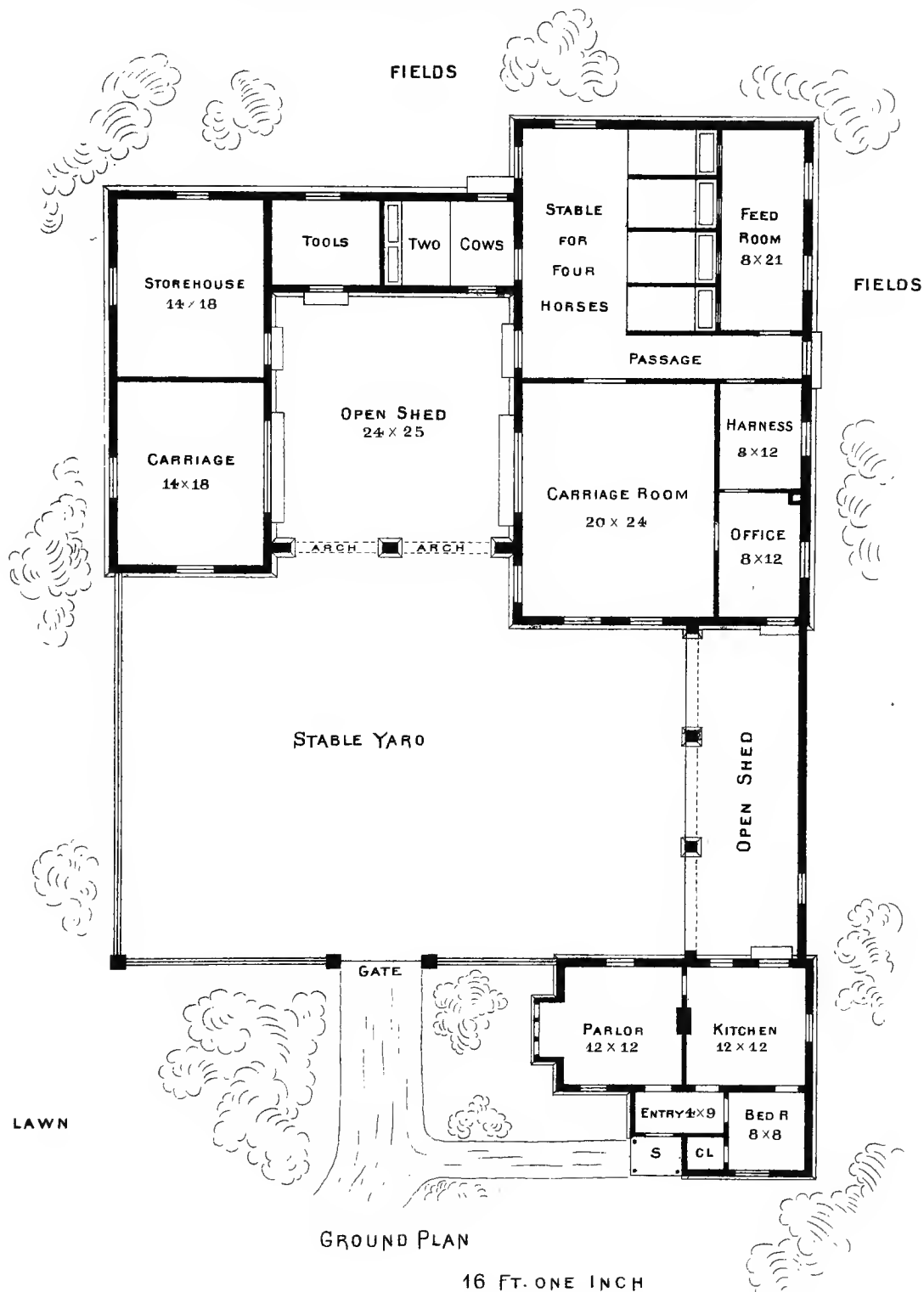
All these buildings are designed to be built of brick, in the same manner as described for the design on Plate No. 4. The floors are of stone and the roofs are slated. The walls are finished smoothly and painted inside, and the ceilings are lathed and plastered. The ceiling of the open shed is lined on the level of the wall-plate with narrow tongued and grooved pine boards, and the space overhead is floored over for storing hay, etc. All the inside wood-work is of pine stained a dark color. The small house is finished in pine stained, and the walls and ceilings are lathed and plastered and hard-finished. The first story of the house is nine feet high, and of the stables ten feet in the clear.

A COMPLETE STABLE WITH LODGE AND SHEDS.



PERSPECTIVE VIEW

A COMPLETE STABLE WITH LODGE AND SHEDS.



SECTION FIRST.

Plates 18 and 19.

A BRICK STABLE FOR EIGHT HORSES.

WE have here a very complete and somewhat expensive stable for a large country place; one supposed to contain all the requisites for carrying on stabling and grooming operations in the most thorough manner.

In any establishment of this size and kind, there is supposed to be help enough always at hand to have everything done properly and in order; therefore, there should be a place for everything, and everything should be kept in its place. There should be a place for washing carriages, with a drained floor and a constant supply of water, and there should be a place for cleaning horses sheltered overhead and at the sides, and yet capable of being thrown entirely open for a free circulation of air on all sides. Water should be supplied inside the stable, near the stalls, for drinking purposes, and also near, or directly over the mixing troughs. There should be an ample harness-room, and, if practicable, a room adjoining it, with a stove and boiler for heating water for sundry purposes in cold weather. There should be a closet with glass doors in front for every fine harness, and another closet for those in more common use. There should be a separate case for bits and chains and other metal work; a rack for whips (whips should always be hung up, heavy end downwards); another for saddles, and separate cupboards and drawers for carriage-ropes, horse-blankets, mats, cushions, and all such things. There should be a place for sponges, pails, cloths and dusters; and a little closet somewhere for medicines, so that in case of emergency the remedies may be always at hand; and still another closet for extra wrenches, nuts, bolts, oils, and all those minor conveniences which, generally when they are wanted (always in a hurry, of course), are never to be found; and, by the way, let us here remark, that every carriage should have its especial wrench, always kept in the box, together with a bolt or two, some strong twine, a couple of iron splints, and whatever else might readily help one out of a difficulty if it should occur on the road.

Attached to a stable of this kind there should also be ample shed-room for driving under, or for storing certain kinds of vehicles in; and in some convenient place, either attached to or distinct from the main stable, a well constructed room for a sick horse, dry, light, protected, and having a floor of tan or some other soft material.

The stable-yard should be enclosed by a high wall, and, if practicable, the dwelling-

house of the head groom should be within this enclosure. (See the design immediately foregoing.)

The arrangements for manure should also be considered. A stone tank sunk below the surface of the ground, laid in cement, and made water-tight, with a roof about five feet above the ground, supported on posts, and with side all open for circulation of air, is a very good arrangement by which both liquid and solid manure may be preserved.

A stable having all the conveniences we have enumerated above, can be taken care of, we are sure, with less expense than one where everything is at sixes and sevens—without system, and without any labor-saving arrangements.

The design represented on Plates 18 and 19, is intended for brick construction, the walls being fourteen inches thick, laid *hollow*; that is, having an eight-inch outside wall and an inside four-inch wall, tied both together across a two-inch dead-air space with iron ties put in every fifth course, and twelve to eighteen inches apart.

There is a bluestone water-table ten inches high, resting on the ground line, the top of it being on a line with the floor of the stable. Above this the walls are eleven feet high, laid with clean and smooth front bricks with narrow dark joints, up to a belt-course of Ohio stone, nine inches high, which runs around the building on the line of the door and window-heads.

The roofs are French roofs slated, with a deck or flat on top, tinned; or if made a little more steep, slated also, with purple and red slates.

The partitions are of brick throughout, and the floors are of stone.

The beams of the second story are of wrought iron, the spaces between being filled with four-inch flat arches of brick, and filled in on top and smoothed off with cement, this forming the hay-loft floor. On the under side, the arches are plastered and hard-finished, the plastering following the curve of the arch.

The walls are also plastered and hard-finished above the line of the wainscoting, which is of ash throughout, five feet high, capped with a neat eap. All the interior finish is of ash, except the stall partitions, which are of two-inch oak plank, let into iron top and bottom rails.

The doors are also of oak, made to slide.

There are stalls for six horses, and two loose boxes, with a passage behind them seven feet wide. From this passage a door leads into the carriage-room, which has a clear space inside of thirty-two by thirty-seven feet.

Running along by the heads of the horses is a feeding passage, and opening out of it is the room where the feed is kept, in chests. It is stored in bulk in the story above, and

dropped by shoots into these smaller chests, which are metal-lined, and thence conveyed to the mixing-troughs.

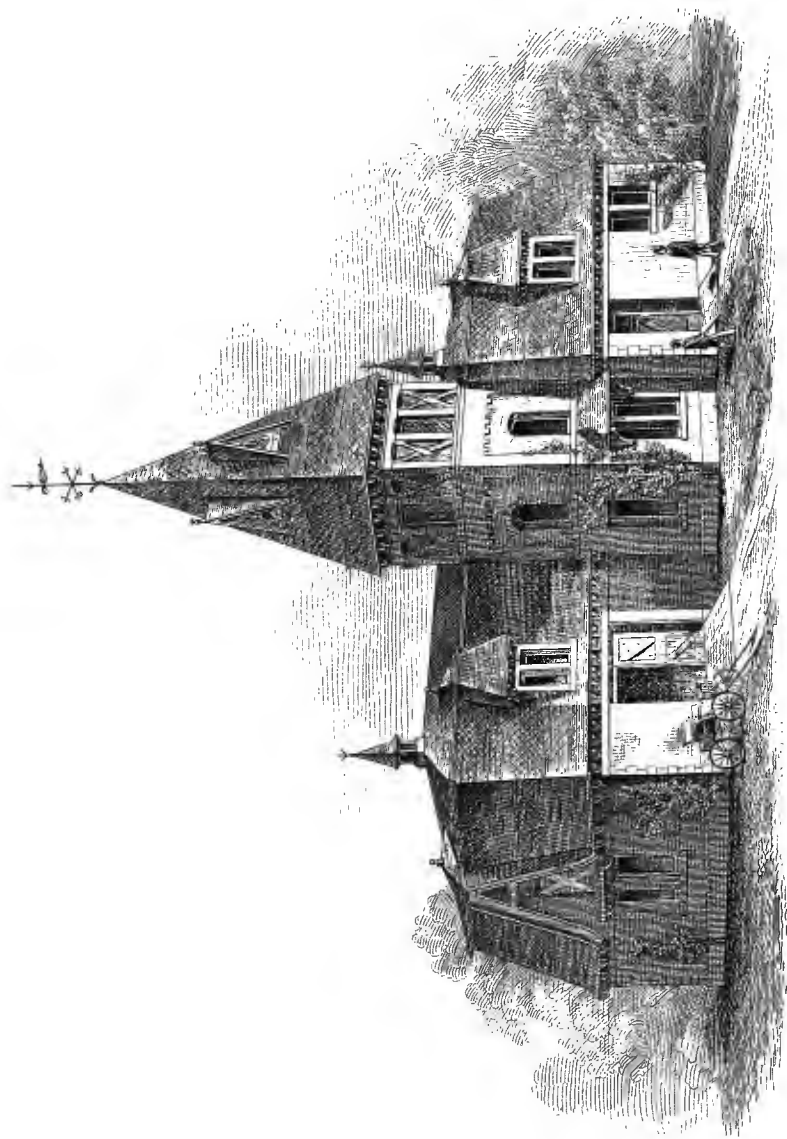
The stalls have iron gutters, iron mangers, iron guards above the partitions, and two rows of iron nibbling or tying-bars in front, and are open on all sides to light and air, making it a very cheerful stable.

The harness-room is twelve feet square, and has closets, drawers, cleaning-table, stove and boiler, racks, etc.

A manure-shed is at the rear, and beyond it, also covered, is a shed for cleaning horses, at the extreme end of which is a room, sixteen by twenty, for a sick horse. This is beyond the limits of our drawing.

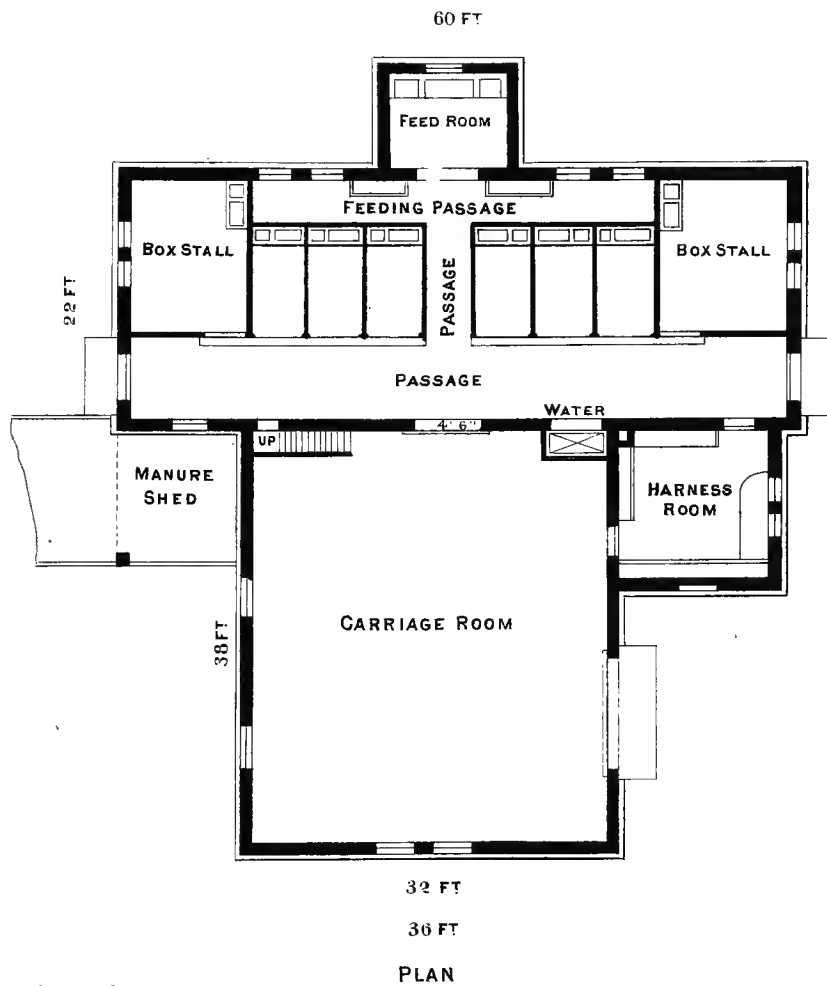
With this design we close our list of stables.

A BRICK STABLE FOR EIGHT HORSES.



PERSPECTIVE VIEW

A BRICK STABLE FOR EIGHT HORSES..



SECTION SECOND.

Plates No. 20 to 25.

BUILDINGS ERECTED AT PLUMBUSH FARM.

PLUMBUSH FARM is an estate of about sixty acres, owned by R. P. Parrott, Esq., and is situated about a mile south of the village of Cold Spring in this State.

It was a farm without any buildings upon it whatever—if we may except a small house, which was afterwards removed to another location and remodeled—and, in 1865, we were directed to design a complete set of buildings, including farmer's-house, barns, sheds, poultry-house, piggery, etc., all of which are here illustrated.

Plates No. 20 and 21, represent the farm-house. It is very pleasantly situated on the edge of a grove of trees through which a drive-way passes, branching from the public road about thirty rods distant. From the windows and veranda are pleasant views of the Hudson river and the mountains beyond it, with the village of Cold Spring for a foreground.

It is a frame building very substantially built, the walls lined with brick and the roofs covered with slate. It is on a side-hill sloping towards the southeast, and the basement on that side is nearly all out of ground. The front door faces the west, and the living rooms are on the south side. In order to give effect to the exterior, the walls are shingled up to the line of the main window-sills, and above that are clapboarded to the eaves. The windows have steep slated hoods, and there are three broad and comfortable verandas.

The basement is built with a very substantial stone wall twenty inches thick, and is divided into cellar, dairy and wash-room, besides an entry for the farm hands, with a staircase in it running up to the main story, and thence up to the attic of the rear wing.

These three apartments are finished off; the floors rest on locust sleepers bedded in concrete, and the walls are lathed and plastered; the dairy has tables and closets, and the wash-room a sink.

In the principal story, we find a hall eight feet wide opening into a parlor on the right, and beyond it into a dining-room, both of which are fifteen feet square. Beyond this is the kitchen, and still beyond this a back kitchen, fitted up with a sink, dressers, etc., and at the right of the back kitchen is the back staircase alluded to.

At the left of the main hall is an office or business-room, used by the proprietor for

transacting business connected with the farm. It is supplied with book-shelves, tables, etc., and has a separate entrance from the yard, near which is another entrance for the family directly to the kitchen.

Near the house is a wood-house, and in one corner of it is a privy. Just beyond the wood-house is an ice-house, mostly under ground. The kitchen and dining-room of the house have ample closets fitted up with shelves, etc., in the usual way.

The second story contains four good finished chambers, all supplied with closets. Over the back kitchen is a room for storage purposes, and in front, over the main entrance, is a small chamber eight feet square, making in all on this floor six good rooms. The attics are unfinished. The principal story is nine and a half feet high, and the chamber-story nine feet. All the interior is finished plainly with pine, and the walls and ceilings are hard-finished.

About sixty rods distant from the farm-house are the barns, etc., belonging to the establishment. The block plan of them is given on Plate 23, and on Plate 22 is the main barn itself. This is a side-hill barn, and measures forty-five by seventy. The upper part is of wood, with a slated roof, and the basement of stone. The plan of the basement here given has been altered somewhat from the original, in the position of the stalls and manure-pit, and is considered an improvement upon it. The manure-pit on this plan is on the right or south end, and next to it—beyond, a five-foot passage way—are stands for ten cows, divided into five stalls, measuring seven and a half feet square each. The mangers are two feet wide and two and a half feet high to the upper edge, and the partitions next the feeding passage are five feet high.

The floors of the stalls slant gradually back to the manure-pit. The whole basement floor is of stone, and the manure-pit is depressed about two feet below it, lined with stone and cemented, in order to save the liquid as well as the solid manure.

There are calf-pens, a feeding-place with large mixing-boxes, and a stairway leading up to the main floor. There are also stalls for three horses, and a separate feed-room, all shut off from the cow stable. Adjoining is an open shed for storing carts, etc., and at the southeast corner is a trough supplied with water from a spring in the hill above.

The principal story has a threshing-floor twelve feet wide, with large doors at each end. On one side is a granary, next it an open space for machinery, and opposite, a large tool-room. The rest of the space is for storing hay, which may be also piled upon an extra loft over the threshing floor.

The timber used in the construction of this barn is all pine, except the rafters, which are of spruce.

SECTION SECOND—PLATES 20 TO 25.

The long posts are eight by ten inches, and the inter-ties connecting, seven by eight inches.

The plates, purlins and struts are six by six inches.

The cross-girths are seven by eight inches.

The braces are four by six inches.

The main floor-beams between the posts are five by ten inches, and the rest are three by ten inches, and eighteen inches apart from centres, all resting on the top of eight by ten inch girders, running lengthwise through the centre.

The rafters are of spruce, three by six inches, and twenty-four inches from centres, resting on the plate and ridge, and on two intermediate rows of purlins.

The roof is covered with hemlock boards and slated, and the walls are boarded vertically and battened. The threshing-floor is of two-inch plank, and the bays of inch and a quarter, all tongued together and made tight.

The fronts of the bays are ceiled up three feet, and at intervals are close ventilators from the basement, and open ladder ventilators for this story running up to a point near the large ventilator on the roof.

The enclosed barn-yard is about a hundred feet square, and forming its western boundary is the building shown on Plate 24, which is used as a carpenter's shop, piggery and poultry-house.

It measures seventeen feet in width and ninety-one feet in length.

A square of seventeen feet on the extreme left is carried up as a sort of tower, to the height of thirty-three feet.

The first story is used as a carpenter's shop, the second as a lumber-room, and the attic as a pigeon-loft.

The next section of the building of twenty-four feet is a piggery. There are two pens, each six by twelve, having a feeding-passagage along the front, and separate yards on the other side, enclosed by a fence and sheltered by the roof of the building. The floor of all this part is of slabs of blue flagging on a concrete bed.

Next on the plan is a room with a boiler in it for cooking fodder, with troughs for mixing, and rat-proof bins for containing corn, meal, etc. ; and next to this is the poultry-house. The yard in front of the poultry-house occupies about two acres of ground, and is surrounded by a high picket fence on all sides, and the front of the house towards this yard is mostly of glass. There is a passage four feet wide along the inside, and, separated by slat partitions from it, are two rooms, each thirteen by fifteen, with roosts, and twenty-seven nests in each one. The nests are each eighteen inches cube, and are placed in three tiers.

SECTION SECOND—PLATES 20 TO 25.

The fronts towards the roosts open out upon broad shelves protected in front, and the partitions between the nests project a foot beyond the face of each, so that the entrances are all quite sheltered. The backs open upon the passage which passes between the two rooms to the hen-yard, and small doors here enable one to remove the eggs without entering the rooms.

At the extreme right are three small rooms for setting hens ; a dozen hens can be accommodated here, each with a nest similar to those in the laying-rooms, though more retired.

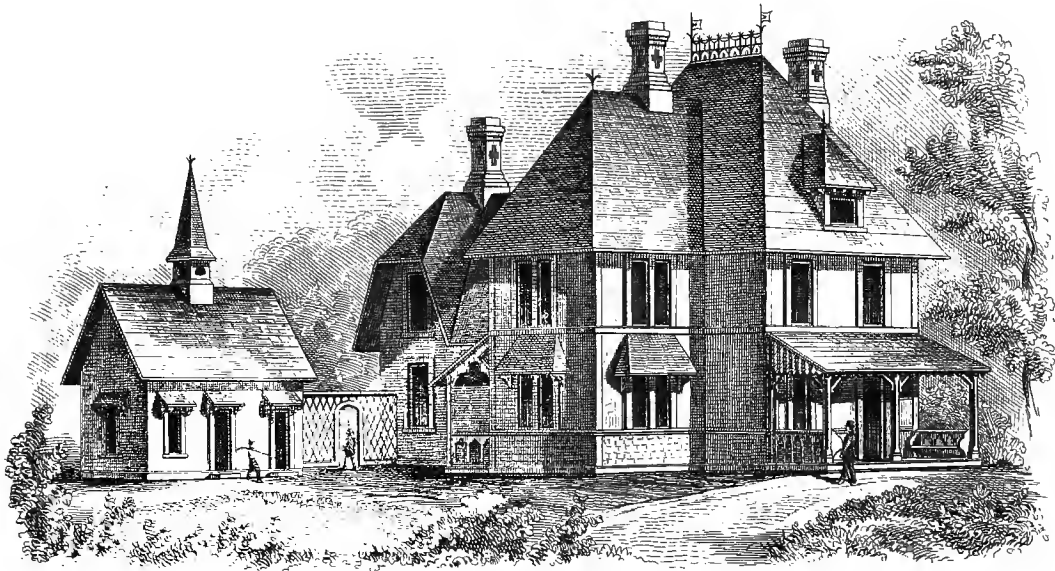
The floor of this henery is of plank ; it was to have been of concrete, which is much preferable, but it was found not practicable on account of the great amount of filling in that would have been required. The walls are of frame, filled in closely with bricks and mortar, and the whole interior, including ceiling, is lathed and plastered. The flue of the cooking-room can be used for warming the henery, so that in cold weather it may be beyond the reach of frost.

Hens love warmth, air, sun, a plenty of room, and, above all, secrecy and quiet when on their nests, and it has been the aim to provide all these requisites in this structure.

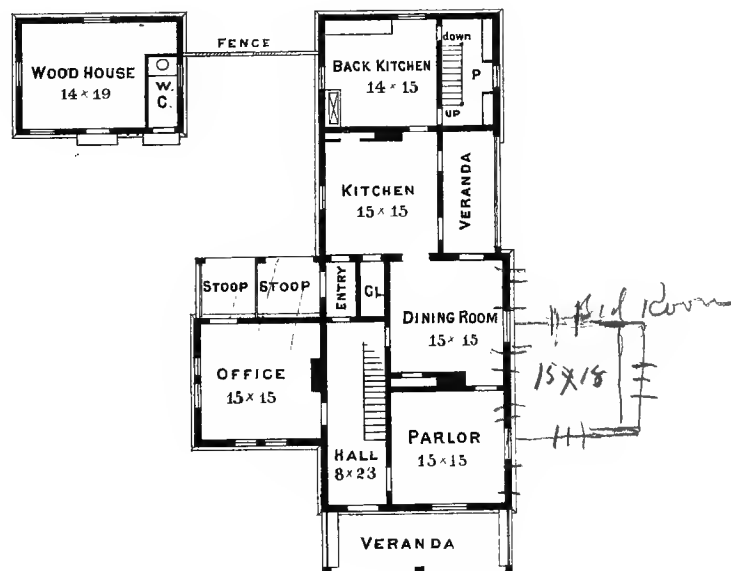
Near it is the corn-crib, which, like ordinary corn-cribs, is of slat-work, elevated about four feet above the ground, and protected by tin plates.

Reference to the block plan will show the barn and the shed adjoining it ; the poultry-house and corn-crib ; the barn-yard and hen-yard, and the fences enclosing them ; the public road on the right, and the private road to the farm-house on the left.

PLUMBUSH FARMHOUSE.

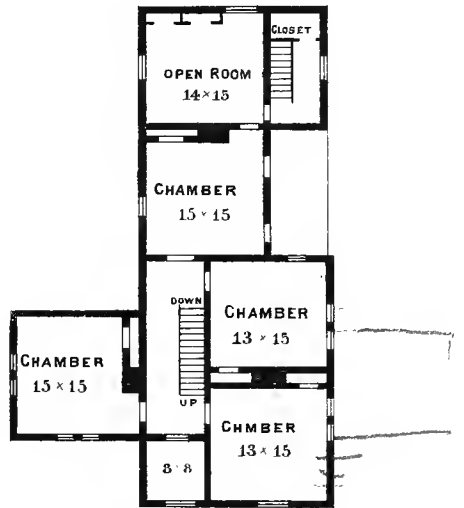


PERSPECTIVE

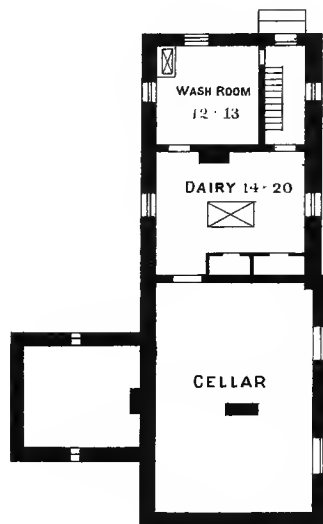


PRINCIPAL FLOOR

PLUMBUSH FARMHOUSE.

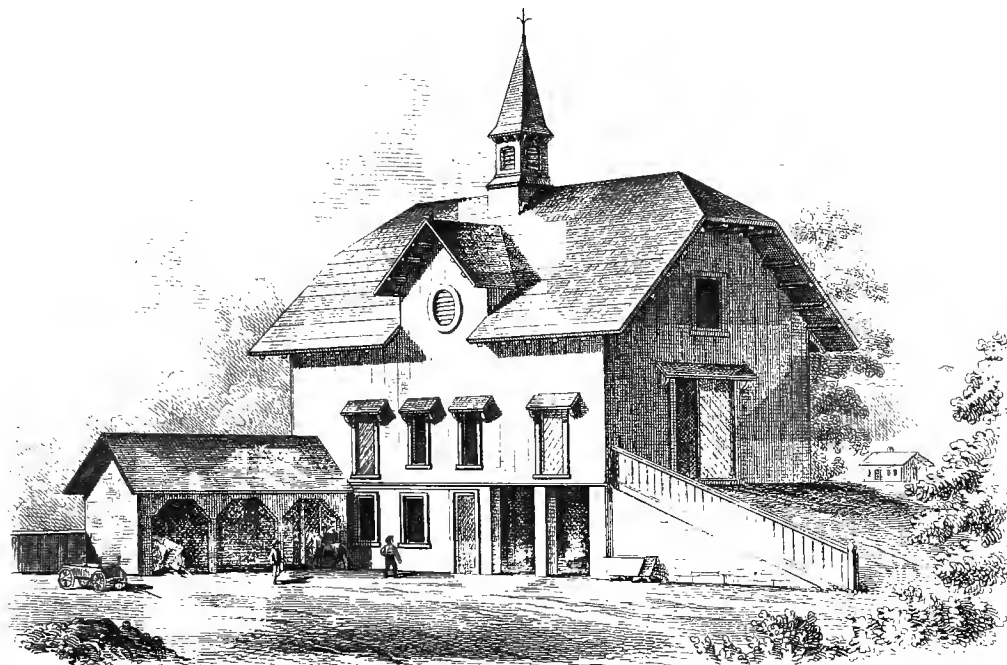


CHAMBER PLAN



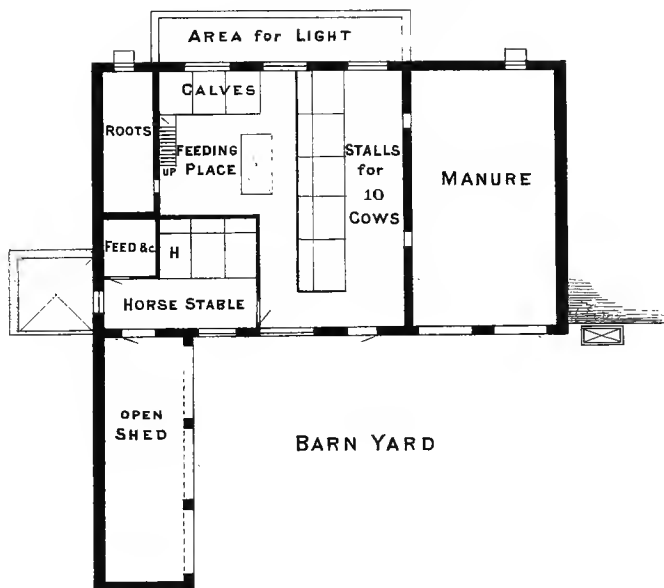
BASEMENT PLAN

PLUMBUSH BARN.



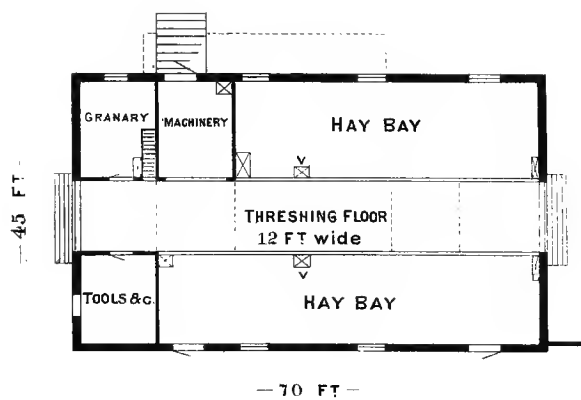
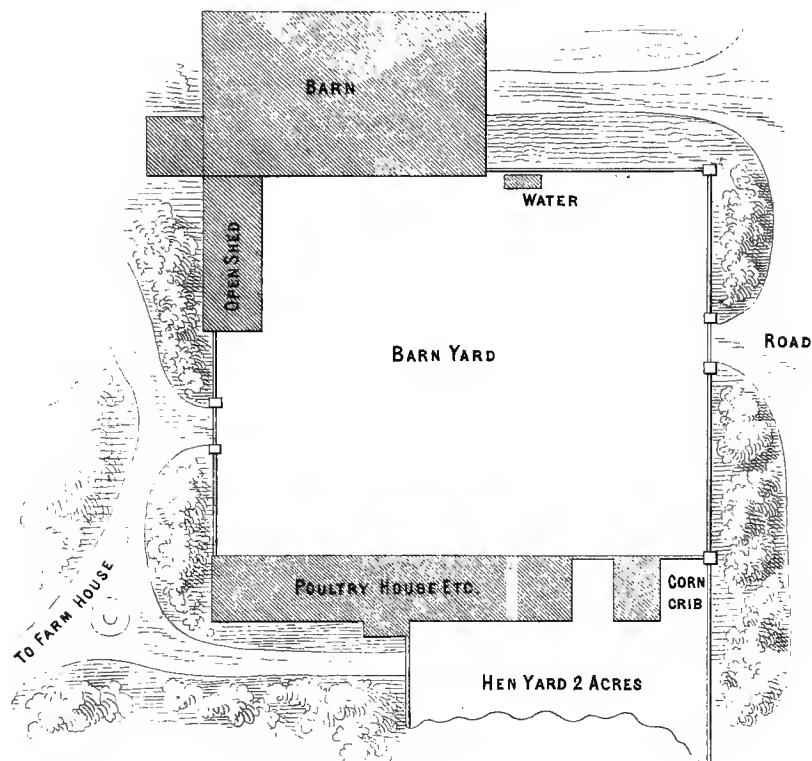
PERSPECTIVE VIEW OF PLUMBUSH BARN

BASEMENT PLAN



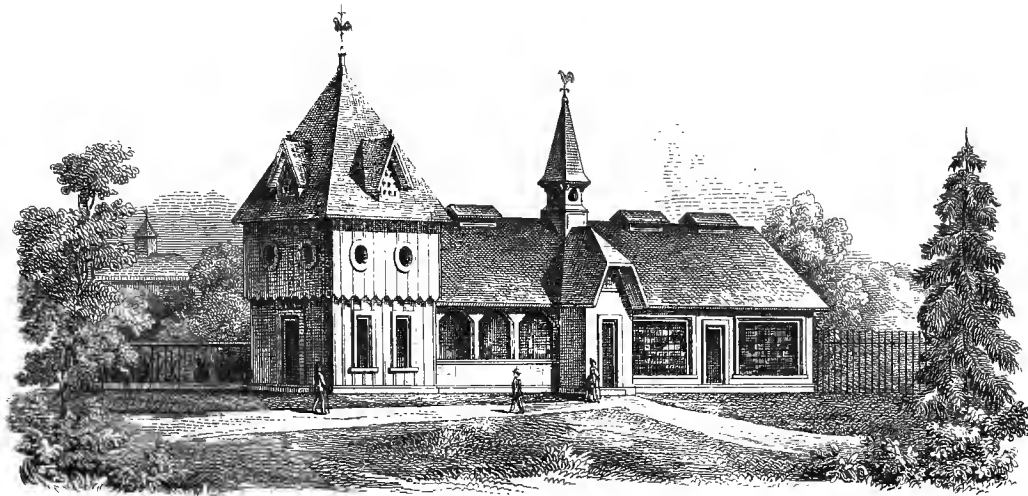
BARN YARD

BLOCK PLAN
OF PLUMBUSH FARM BUILDINGS

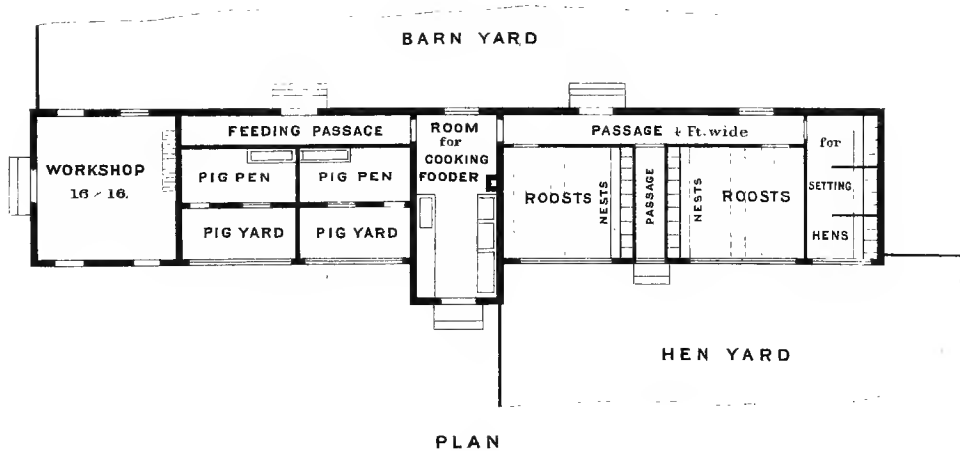


PRINCIPAL FLOOR PLAN OF
MAIN BARN

PLUMBUSH HENERY &C.



PERSPECTIVE



SECTION SECOND.

Plates No. 25 to 30.

BUILDINGS FOR A LARGE STOCK FARM.

THE buildings here illustrated will afford a good example of what is required in a very complete and first-class establishment for raising stock.

On Plate No. 27, the block plan will show the general and relative arrangement of the buildings.

In the front is the main building with its wings, extending a length of two hundred and ninety feet. From these wings at right angles run two other wings, the one on the left for pigs and sheep, and the other, on the right, intended as a sheltered run for young colts. Beyond the left wing is the dairy, and close by it is the ice-house. Opposite the main barn is a manure pit.

The horse-yard is separated from the cattle-yard by a fence, and enclosing them both is another fence, so that within is formed a sort of hollow square, which fronts towards the south. This square occupies an area of two hundred by two hundred and ninety feet.

The general idea for the arrangement of these buildings was taken from plans published in the "American Agriculturist" in 1867, as one of the Groesbeck prize plans, made by us in competition.

Plate No. 25 shows the perspective view of the main building. As will be seen in the picture, it comprises a central building with wings on either side. The basement of the central building is on a level with the floor of the wings and nearly level with the ground also; being raised up about ten inches above the grade. The second story is reached by means of inclined planes from the front and rear, and is used wholly for the storage of hay and grain, and for threshing purposes.

Plate No. 26 shows the ground plan, and on Plate No. 27 is the plan of the second floor.

ACCOMMODATION.—Commencing in the central portion of the basement or first floor plan, we find a space marked "open sheds," covering an area of forty by forty-five feet. This is intended for the storage of wagons, carts, implements, etc., and also for the placing of machinery for carrying on such of the farming operations as it is adapted for. This space has broad arched openings on three sides towards the yards.

There are two root-cellars provided here, each measuring about twelve by twenty-four feet—and a shop for repairing, fitted up with carpenter's bench, etc., and having a smoke-pipe

flue near the ceiling. On the left of the front projection is a room marked "feed-room." This is directly under the granary, from which shoots convey feed to large mixing-boxes. There is a large receptacle for cut hay, also supplied from the floor above, and a water-trough, with a constant supply of water. The feed is mixed in this room, put into a large box to which wheels are attached, and run along the feeding-passage and distributed to the several stalls. This feeding-passage has an uninterrupted length of two hundred and ninety feet. Near the centre of the barn is an elevator ten feet square, to be worked by machinery and used for raising and lowering machinery and other heavy apparatus from story to story. The rest of the space in the basement of this central part is all open room, and near the entrance door, which is under the bridge of the main doors above, is a large platform scales.

At the right of the central portion is the horse wing. This is thirty-six by one-hundred-and-two feet; has brick walls, a paved floor, and a plastered ceiling. The feeding-passage is six feet wide, and at the rear of the stalls is a passage-way eight feet wide, having in it two troughs constantly supplied with water. There are stalls for fourteen horses, each six feet wide. Leading from this rear passage is an open shed for grooming horses in, and another for airing bedding after use. The place for storing bedding is close by. In the horse wing are seven loose boxes, five of which are open and two of which are close rooms, for sick horses.

At right angles to this wing is another, eighteen by eighty feet, all open inside, and intended as a place for young colts to run in. It has three doors leading to the yard, and a trough for water. The stalls and boxes are all made after the most approved manner, having iron fixtures, iron stall partitions, and iron gutters to convey the liquid manure to two large brick tanks, marked L, M, T, on the plan. There is a harness-room eleven feet square, provided with cupboards, etc.

The wing for the cows is on the left of the central part, and measures thirty-two by one hundred feet. It has stalls for twenty cows, arranged in pairs, each double stall averaging seven-and-a-half feet wide. There are two water-troughs here, and just outside the building is a shed seventeen by forty feet, for milking under. The feeding-passage in front of the stalls is six feet wide, and on the other side of it are eight calf pens, and three open boxes, each eight by twelve, besides a close room or box, twelve feet square. Near this is a room finished off for a man to sleep in. In the extreme left end of this wing, and separated by a brick wall, are two boxes for bulls, and connected with each is a separate yard, surrounded by a strong fence.

Branching from the cow-wing at right angles, is a wing measuring sixteen by eighty-four. The first section has five pig-pens with five separate yards. Next is a room fourteen

by eighteen, for storing and steaming the fodder, and beyond it is a shed, to be used as a feeding-shed for sheep.

The wings are only one story high, but there are lofts over them which may be used for storing, if extra space be required.

The upper part of the central building is used principally for storing hay. There is a threshing-floor running entirely through it from north to south, with a door at each end, and inclined planes to reach it by. This is fourteen feet wide, laid with two-inch plank grooved, and put together with tongues of half-inch by inch stuff. The floors of the bays are laid with one-and-a-quarter inch tongued and grooved plank, and the fronts are ceiled up three feet high. In these bays, running from the floor to the roof, are eight slat-boxes or ventilators, designed to prevent the heating of the hay when packed in bulk. They are all connected with the outside air by means of boxes running along between the beams of the floor, and having wire nettings at the ends in the walls. To aid in ventilating, most of the window openings in this upper part of the barn are fitted with heavy blinds instead of glass windows.

The granary is on this floor, and is separated by close partitions from the rest. There is a door from it opening outwards with a heavy crane over it, to be used for hoisting feed from wagons outside, when necessary. The bins are all made of heavy plank, with sliding-doors in front, double bottoms, and joints protected by zinc. Shoots run from these directly to the feed-room beneath.

CONSTRUCTION.—These buildings are all designed to be constructed in the very best manner throughout. The foundations of stone, the walls of brick, and the roofs all slated.

The floors of all the open sheds, and of the sheep and colt-rooms, are to be of gravel. Those in the feed-room, harness-room, and repair-shops, to be cemented; and all the others, comprising those in the horse and cow stable and main basement, to be paved with large paving-stones, and then evenly grouted up with cement—all except the piggery floor, which is to be paved with bluestone flagging laid in cement.

The greatest length of the central part is ninety-four feet, and the greatest width eighty-eight feet. The ceilings of all the basement, except the sheep and colt wings, are to be lathed and plastered and whitewashed. These ceilings are about eleven feet high, and the roofs are trussed so as to be self-supporting. The inner main partitions are of brick, and in the basement of the main barn are twenty brick piers, each two feet square, for the support of the frame-work above.

The inner frame-work of the superstructure is of the most substantial kind; the timber is all pine or spruce, except the rafters, which are hemlock.

The girders carrying the floor beams are eight inches by twelve inches. The floor

beams themselves, three by ten and eighteen inches apart from centres. The main posts ten by twelve inches. The cross girths from posts to walls, and the cross-ties and inter-ties, five by ten inches. The wall-plate is four by ten inches, and the post and purlin-plates six by six inches. The bracing is four by five, four by six, and six by eight inches. The common rafters are hemlock, three by six inches, and twenty-four inches from centres. All the outside wood-work has three coats of brown paint, and all the inside wood-work has two coats of blue lead paint.

THE MANURE-PIT, shown on Plate No. 28, measures twenty by thirty-six, and is constructed in the following manner. The bottom is sunk about three feet below the level of the ground, and the walls, up to the grade line, are of stone laid in cement. The bottom is concreted, and the sides are tightly cemented. Above the grade, to the height of five feet, is an eight-inch brick wall, with a gateway left in it at one end. On this wall is put a plate, or sill for the frame, and upon this is raised the frame of the top. The framed sides above this are about six feet high; a portion left always open for the circulation of air, and the rest closed by vertical boarding and battens, as shown in the plan and perspective. Covering the whole is a slated roof with broad, overhanging eaves.

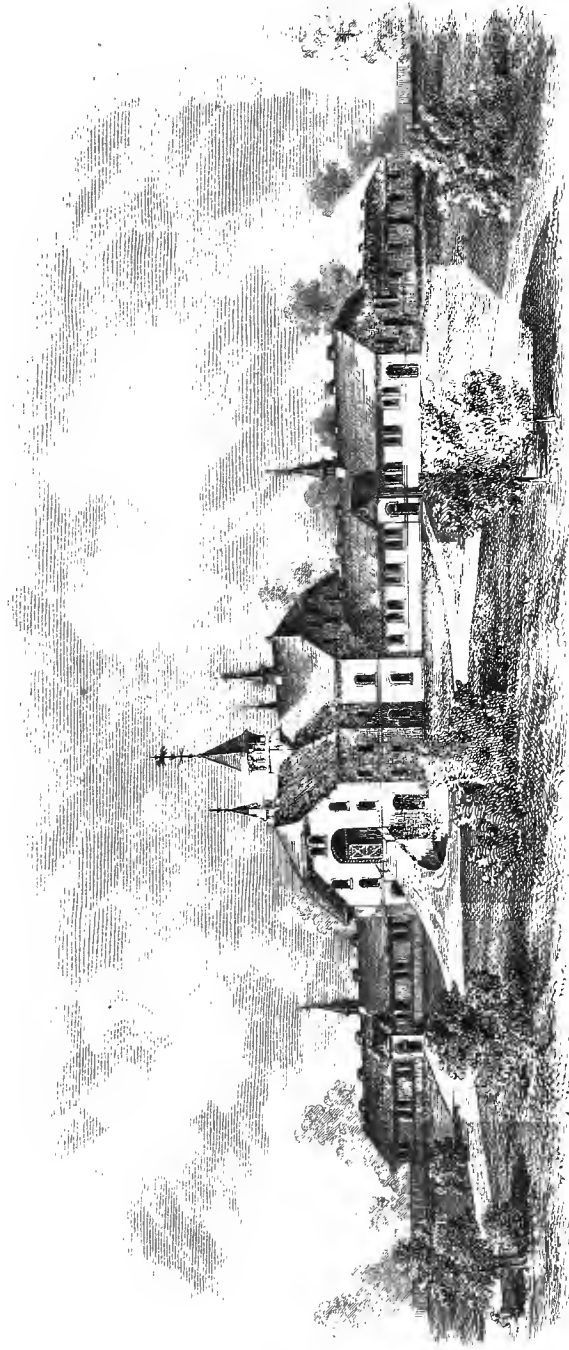
THE DAIRY is at the southeast corner of the enclosure. As will be seen by Plate No. 29, it is somewhat picturesque in character, though very simple as to construction. It has two stories and a cellar. The cellar has a cemented floor and whitewashed walls, and is intended as a cool storing place for butter. In the principal story is a room fourteen by twenty, for making butter in. It has a wide marble table or shelf; a large sink for washing, with a supply of water over it; cupboards and closets; and a flue for a boiler smoke-pipe. Adjoining it is a room nine by eighteen feet, for setting milk for cream. This has stone shelves three feet wide all around, over which flows constantly a stream of water, which, entering at the upper end, flows around the pans, and is discharged at the lower end into a small cobble-stone cesspool about twenty feet from the house.

The cheese-room is eighteen by twenty-four; has a chimney flue, stands for presses, etc., and overhead a loft for curing cheese.

This building is built of brick and has a slated roof. The interior is all finished off, lathed and plastered. There is a stoop at the entrance, and near it are wide shelves for drying pans upon.

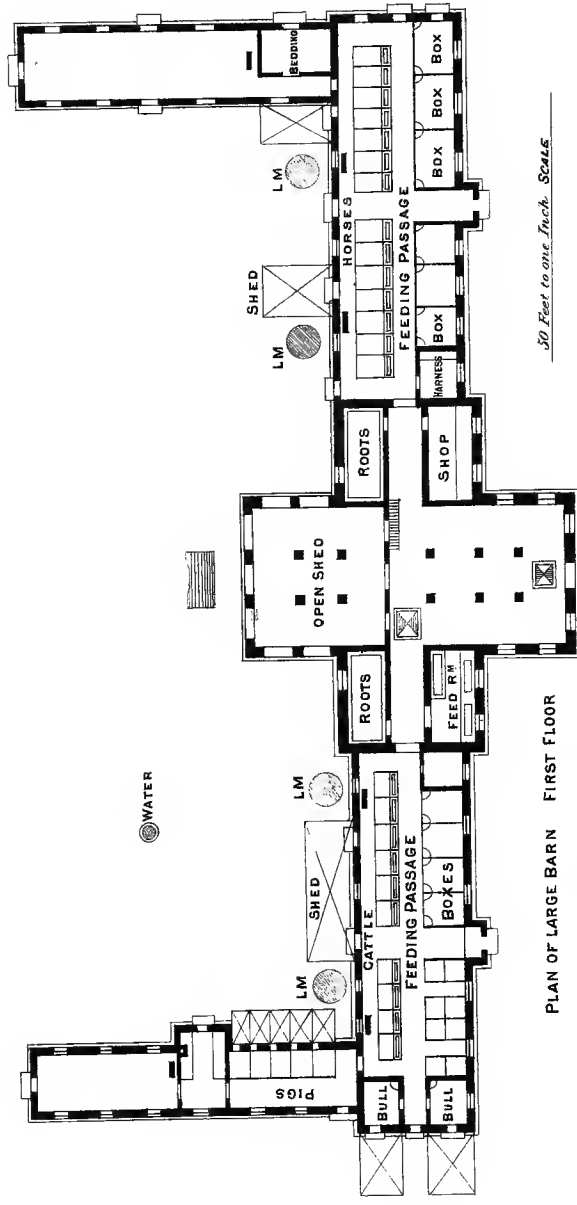
THE FENCE connecting all these buildings together, and dividing the horse-yard from the cattle-yard, is seven feet high, made of four-inch pickets, placed four inches apart, and carried on locust posts, about seven feet apart, set three-and-a-half feet in the ground.

BARN FOR A LARGE STOCK FARM.



PERSPECTIVE VIEW

BARN FOR A LARGE STOCK FARM.

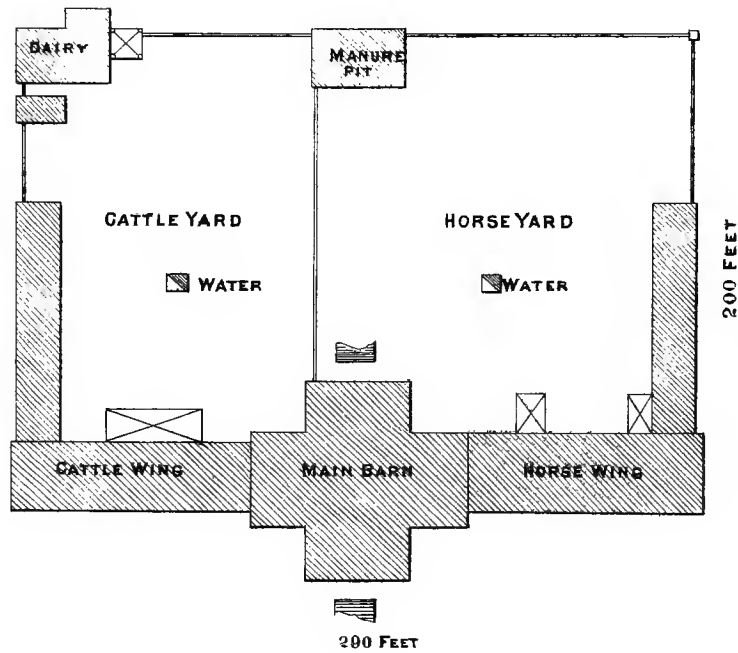


50 Feet to one Inch. SCALE

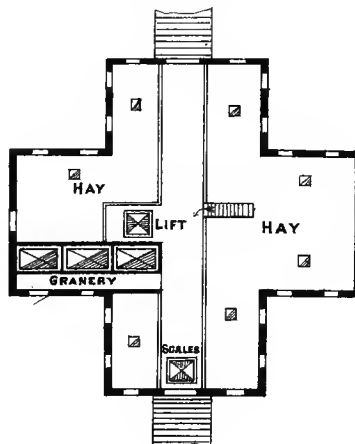
PLAN OF LARGE BARN FIRST FLOOR

BARN FOR A LARGE STOCK FARM.

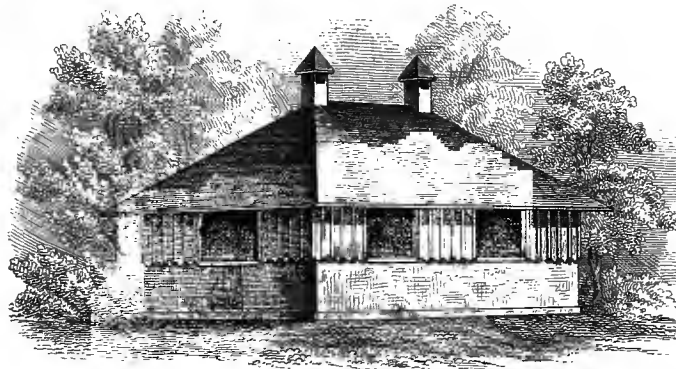
BLOCK PLAN OF THE FARM BUILDINGS



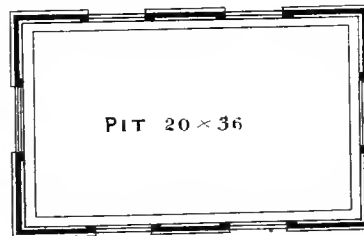
PLAN OF SECOND FLOOR OF MAIN BARN



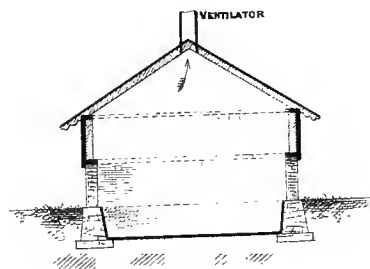
MANURE PIT FOR A LARGE STOCK FARM.



PERSPECTIVE

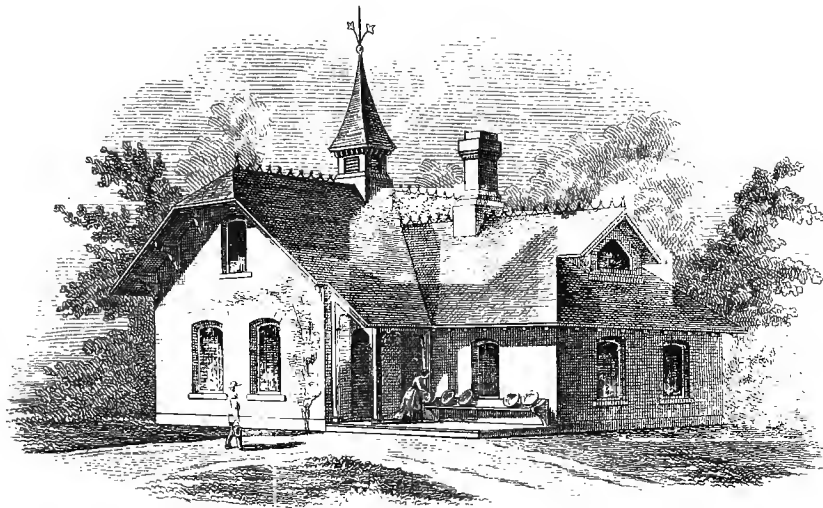


PLAN

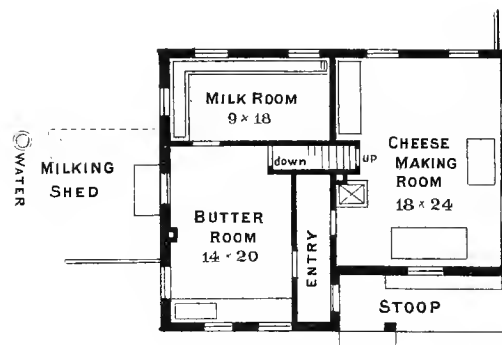


SECTION

DAIRY BUILDING FOR A LARGE STOCK FARM.



PERSPECTIVE



PLAN

SECTION SECOND.

Plates No. 30 and 31.

A FARM BARN.

WE here present a design for a barn which, though not in reality a *side-hill* barn, combines all the advantages of that manner of building, with more perfect light, more thorough ventilation, and more extent of yard-room; in fact, the basement is a full story entirely above the ground on the two longest sides, and having windows and doors opening out upon two barn-yards, one on the north and one on the south.

The foundation and basement are of rubble-stone, laid in cement. The bottom course is three and a half feet in the ground on a solid foundation, and the walls are two feet thick at the two ends, the sides being carried on stone piers, between which are windows and doors. The superstructure is of frame, boarded and battened, and the roof is slated. The eaves project some three feet, and are carried on heavy brackets, and the ridge of the roof is surmounted by a ventilator.

The doors are all made in two halves, so that the upper half may be open for air while the lower half is shut.

The inclined planes at each end which lead to the main floors, have sides of masonry filled in with stones and gravel, and under one of them is a large root cellar, opening into the wagon shed, on the left of the plan.

The perspective view is taken from the north side.

The winter barn-yard and the entrances to the basement, are on the opposite or south side, as will be seen by the plans. There is a rain water cistern on this side twelve feet in diameter, taking the water from the roof, and near by is a trough, with a pump for filling it. The manure-pit extends across the whole western end, and has a door opening to each barn-yard. There are stalls for ten cows, with a six-foot passage between them and the manure-pit. There are two boxes for cows besides, and stalls for two yokes of oxen; also two calf-pens.

. The wagon shed occupies the east end of the basement seen on the left of the plan.

SECTION SECOND—PLATES 30 AND 31.

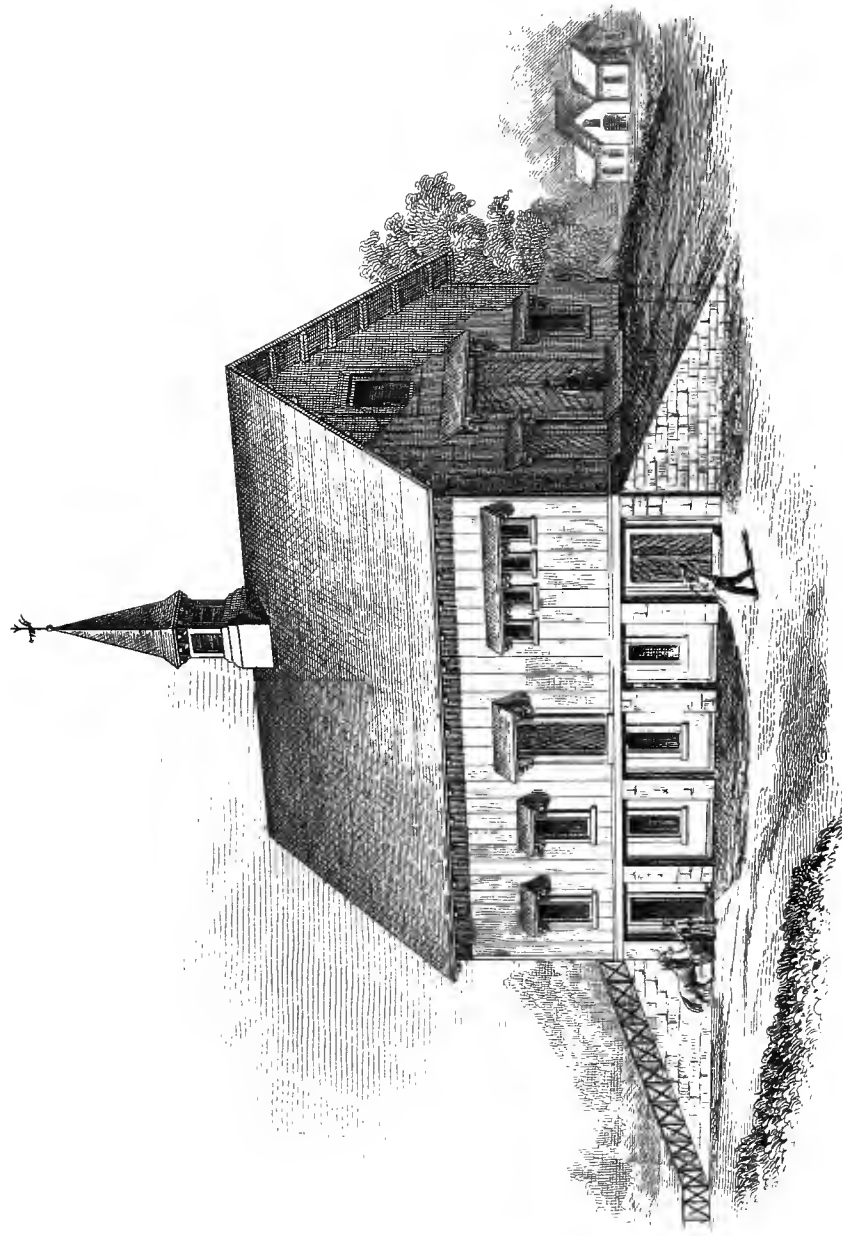
The feed is all kept in the story above, and is discharged into large mixing-troughs in the feeding passage. This feeding place is large and convenient to all the stalls.

The barn measures forty-five by seventy feet, and the posts of the upper portion are seventeen feet long.

On the principal floor are large hay bays on either side of a threshing passage, extending from the floor and from the tops of the small rooms up into the roof. Hay may also be stored over the threshing floor, above the levels of the main doors. There are four large ventilators, running from the basement up to the cupola.

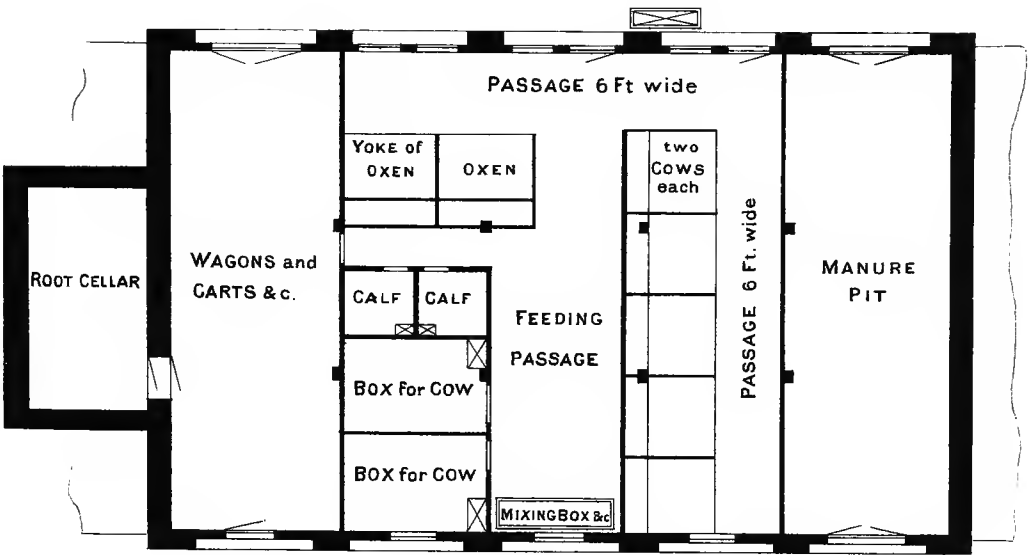
The tool-room is fourteen by sixteen ; the granary is ten by fourteen feet, and adjoining it, and directly over the manure-pit, are stalls for four horses, with a plank floor resting on locust joists.

A BASEMENT BARN.

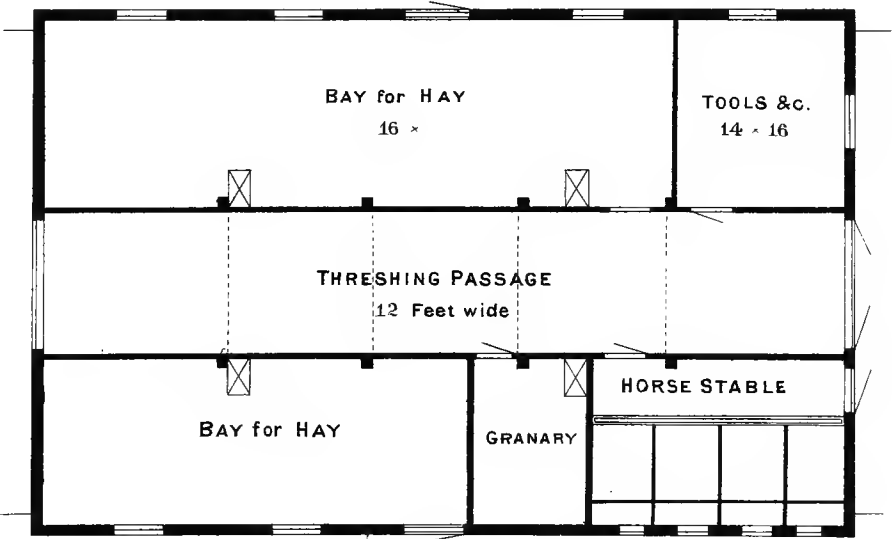


PERSPECTIVE VIEW

A BASEMENT BARN



PLAN OF BASEMENT



PLAN OF MAIN FLOOR

SECTION SECOND.

Plate No. 32.

OUTBUILDING FOR A SMALL VILLAGE LOT.

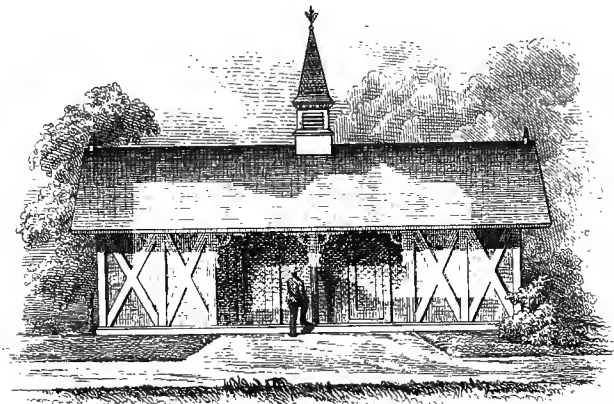
THIS design represents a small one-story building, suitable in size and proportions for any village lot of ordinary dimensions. It is intended to be used as a woodhouse and workshop, and has in it besides, a privy and a small tool-room. Buildings of this description are more commonly than elsewhere, found in New England towns, where they are popularly termed *woodsheds*, and no place is considered complete which lacks one. Sometimes they are attached to the house, and sometimes they are placed entirely separate. If attached, they partake of the general style of the main building, though plainer of course, and form an extension of the kitchen wing.

They are seen in many of the older-fashioned places, joined to the kitchen at the *side* of the house, and extending, perhaps, a hundred feet in the same line with the front, and terminating in an ample carriage-house and stable.

The lot on which this building is supposed to be put, is sixty by about one hundred and fifty feet. Then the house—we will say thirty feet square—will stand about fifty feet back from the street, and will be so placed as to allow a good wagon-way past it to the rear. At the extreme end of the lot will be the outbuilding, measuring twenty by thirty-six feet, and between it and the house a green grass-plot, with a rustic well, or arbor, or something of the kind, in the centre. The fences should be hidden by rows of *Arbor Vitæ*, or hemlock, or spruce; and, here and there in front of them, deciduous shrubs in clumps, to make the straight line irregular. Much cannot be done, of course, in sixty feet, but something can be accomplished, and that to a very considerable extent, by the proper treatment of a very few shrubs and evergreens, and a half a dozen fine deciduous trees. The object should be on so small a space, to preserve the completeness as much and as well as possible, with no attempt at variety or intricacy.

This little building is of frame, covered vertically on the outside with tongued and grooved boards, and finished as shown in the picture, with braces and corner boards, made of two by five-inch stuff, planted on the face of the boarding. A recess in front forms a veranda, from which open the different parts. The privy is on the right, and has an outer and an inner door. The vault should be stoned or boxed up, and have a hinged cover at the rear for cleaning out by. The woodshed is fourteen by twenty feet, and the workshop is fourteen by fifteen feet, having a large closet for tools opening out of it.

AN OUTBUILDING FOR A VILLAGE LOT.



ELEVATION



PLAN

SECTION SECOND.

Plate No. 33.

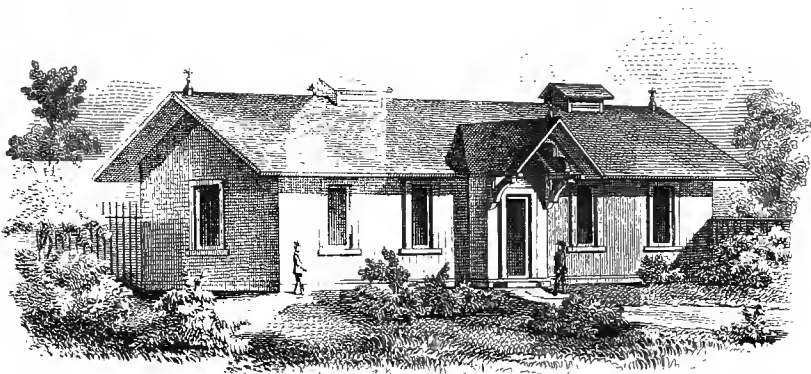
A N O T H E R O U T B U I L D I N G .

THIS is another design for an outbuilding, somewhat larger than the last, and having, instead of the workshop, a hen-coop and a pig-pen, thereby, perhaps, making it valuable to a greater number of persons. This would occupy nearly the whole width of a sixty-foot lot, and should be placed so that behind it would be the kitchen-garden, hen-yards, etc., while between it and the house should be the grass-plot and trees. In the centre is a passage six feet wide, running directly through it and connecting the front with the rear yards.

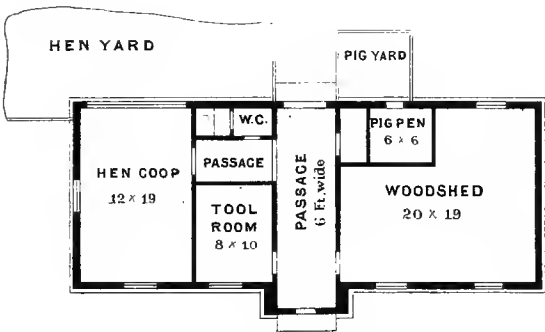
There are in it a wood-room nineteen feet by twenty, and a pig-pen with a pig-yard attached, on the right of the passage; and on the left a tool-room, eight by ten, a hen-coop, twelve by nineteen feet, and a privy. The hen-coop is supposed to have all the proper fixtures in the way of nests, roosts, feed-boxes, etc., and at the rear is a yard extending indefinitely—the larger the better for the hens.

The building is very simple, framed, boarded and battened, and having a shingled roof.

ANOTHER OUTBUILDING.



PERSPECTIVE



PLAN

SECTION SECOND.

Plate No. 34.

STABLE AND SHED COMBINED.

THIS design might, perhaps, have been placed with greater propriety in Section First, inasmuch as it is partly a stable; but as it is equally a woodshed, and as its general character seems to place it here, we have here put it.

We have endeavored to provide for the requirements of a person who, living on a village lot—say, sixty by one hundred and fifty feet—wishes, besides the wood-house and tool-house, to have accommodation for a single horse and carriage, with room overhead for a few bundles of hay.

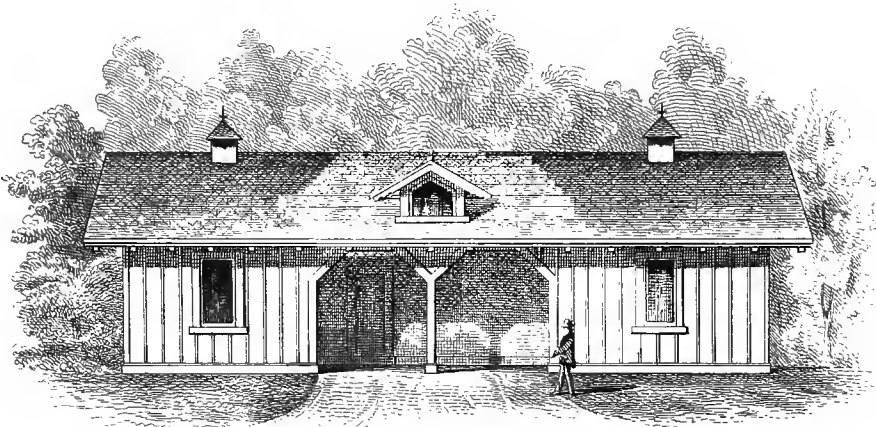
This building measures twenty by fifty-four feet. The central compartment is an open shed, twenty feet square, at the farther end of which is a door opening to the yard beyond the rear. In this shed should be a manger and a hay-rack, so that (as there is here only one stall) a stranger's horse may at any time be fed and watered.

The stable is in the right wing, and comprises one stall six feet wide, with a wooden hay-rack and manger, and a carriage-room ten by eighteen feet, with doors leading to the shed. There is a closet for feed in the horse-room, and another for harness in the carriage-room.

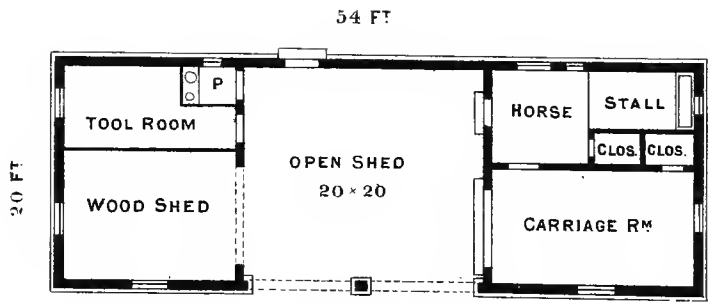
On the left of the open shed is a wood-shed fourteen by sixteen feet, having no doors, but an arched opening towards the shed. Next to this is the tool-room, six by sixteen feet, and taken out of the tool-room space is a privy with a boxed vault.

This building, like the others, is very simple in construction, having a light frame, boarded and battened walls, a shingled roof, and plank floors. The stable and shed parts have a floor overhead, with a little window on the front of the roof to light the loft by, and a door over the end windows of the stable to fill it by; or, it may be filled by means of a trap-door over the shed, directly from a wagon, and a tackle and fall may be hung from the roof directly over the trap-door.

STABLE AND SHEDS COMBINED.



ELEVATION



PLAN

SECTION SECOND.

Plate No. 35.

A COMPLETE OUTBUILDING.

THIS design was made for a gentleman in Fishkill some years since, and comprises nearly every convenience it is possible to get within the compass of a building of this kind.

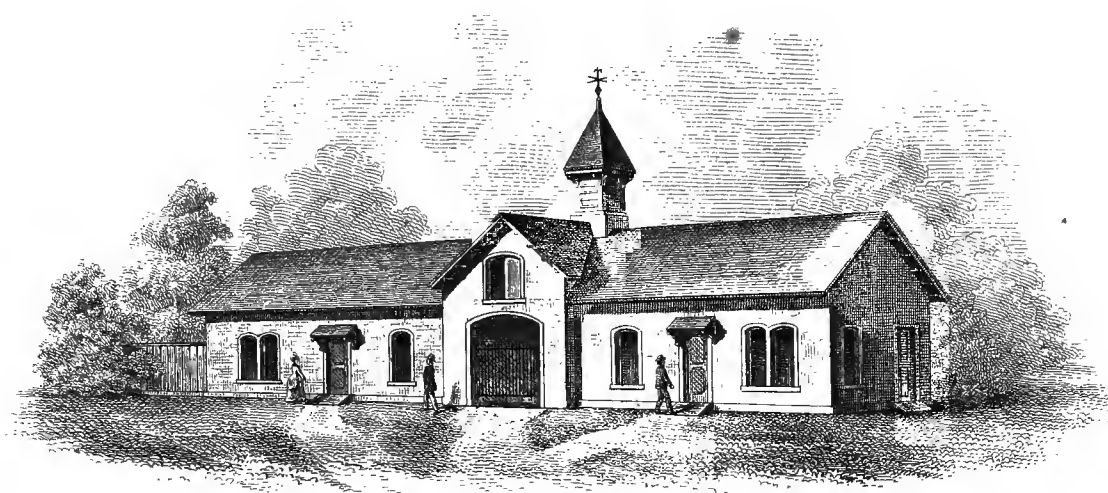
It is sixteen feet in width, and has total length of ninety feet, counting the length of the pig-pens and yards.

The central portion which projects in front of the rest, and has a gable over it, is an open space, designed for piling up wood, etc. It measures fourteen feet by seventeen. At the right is a cow-house sixteen feet square, having stalls for three cows and a stairway to the hay-loft over it. On the right of the cow-house is a work-shop. Both have doors to the yard.

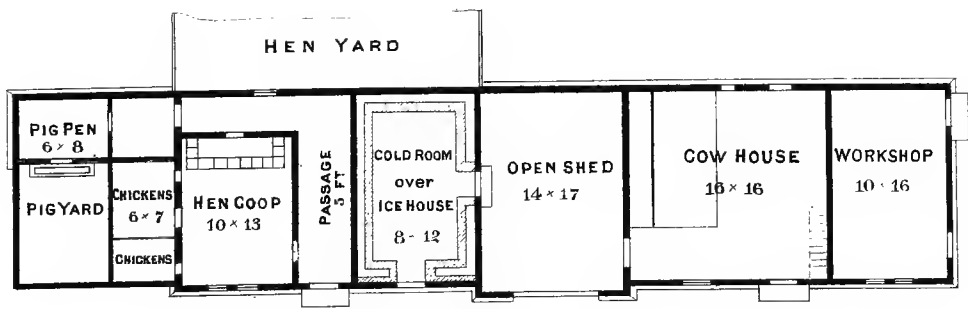
On the left of the open shed is an ice-house mostly under ground, and over it a cold room for preserving meats, etc. Next to this is a passage-way, and at the left of the passage a hen-coop, fitted up with nests, roosts, etc., and having communication under the floor with a large hen-yard at the rear of the building. Next comes a room for chickens with a separate yard, and beyond this is the pig-pen, with its yard, surrounded by a tight board fence, a part of which may be seen in the perspective view.

This building was built in the vertical and battened manner.

A COMPLETE OUTBUILDING.



PERSPECTIVE



PLAN

SECTION SECOND.

Plate No. 36.

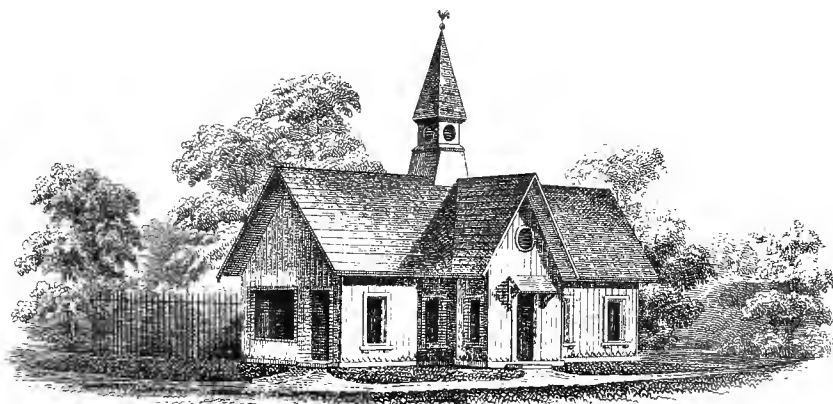
DESIGN FOR A POULTRY-HOUSE.

THIS little building is a poultry-house which has recently been built near the village of Cold Spring.

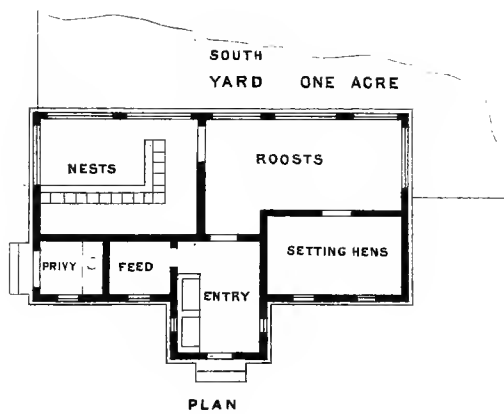
It stands in the midst of a wood, close by the gardener's cottage on a gentleman's place, and has a yard on the south side occupying about an acre of ground, and surrounded by a picket fence eight feet high. The southern front of the building is nearly all glass, affording a plenty of sunlight to the inmates. The entrance is on the north side—the front shown in the picture—and the door opens first into an entry seven by nine feet. On the right is a room, seven by twelve, for sitting hens, and on the left a closet for feed, fitted up with rat-proof boxes or bins. The roosting-room is ten by nineteen, and has inclined roosts placed about twenty inches apart, and room in front for feeding. The laying-room is ten feet by twelve, and has thirty-two laying-boxes, placed on wide shelves in two tiers, and having sheltered entrances on the side towards the glass front. There are doors at the rear of them for taking away the eggs. In one corner of the building is a privy belonging to the gardener's house.

This building is of frame, battened, and has a slated roof. The walls are filled in with bricks and mortar, and are lathed and plastered. The ceilings are also lathed and plastered. The floors are grouted-up and cemented.

DESIGN FOR A POULTRY HOUSE.



PERSPECTIVE



PLAN

SECTION SECOND.

Plate No. 37.

AN EXTENSIVE POULTRY-HOUSE.

THIS design represents a poultry-house of considerable size, suitable for a large country place, or for an establishment where eggs and poultry are raised for market.

It is supposed to be constructed of bricks, the central portion being twelve feet wide and thirty-six feet long, with walls thirteen feet high, and the wings each twelve by twenty-four feet, with walls eight feet high. The second story of the central portion is used as a pigeon-house.

The ceilings are lathed and plastered, and filled in with tan or sawdust, and the roofs are slated. The entrance is on the north side, and the yard opens towards the south, and is surrounded by a lattice or picket fence, about seven feet high. In the middle of the yard is a shallow pond fed by a constant brook, so that there is always a supply of water for the fowls. It is also desirable (although we have not shown one on this plan) to have a sheltered place for hens and chickens to run about and scratch in during rainy and stormy weather; and we would put this in the form of a low-roofed shed, extending, say—fifty feet at right angles to the roosting-room.

The floors of this house are all raised about two feet above the ground, and are of concrete and cement, and should be made vermin-proof.

At the right and left of the entrance are two large feed closets, provided with suitable bins for storing the corn, etc. Directly in front is the laying-room. This is fitted up with seventy-six nests in two tiers, each nest occupying a cube of about eighteen inches. The lower row is twelve inches above the floor, and the entrances are in the form of an oval, facing upon a broad step. The front of each is separated from the front of the next, by a perpendicular board or partition about a foot wide, extending out at right angles between them. The passage between these nests and the wall is about two feet wide, and from this passage are frequent openings to the yard. The whole of the passage to the lower tier is shelved over, which shelf forms a platform to enter the second tier by, being reached by

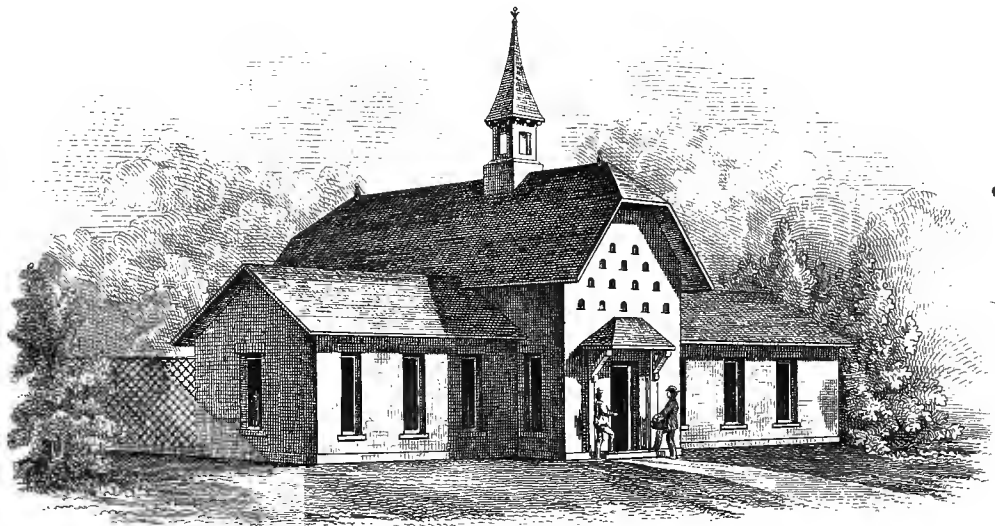
step-ladders from the yard. The nests here are sheltered in the same way as the lower tier, and the passage-way is covered over with lattice-work horizontally, on a line with the tops of the second tier of nests, to prevent the hens roosting in this part. All this work being on hinges, may be swung up for cleaning at any time. Back of the nests is the passage for examining them and removing the eggs, each box having a door with a lock or catch of some kind.

The roosting and feeding-room is twelve by twenty-four feet, and has water-boxes, feed-boxes, etc.

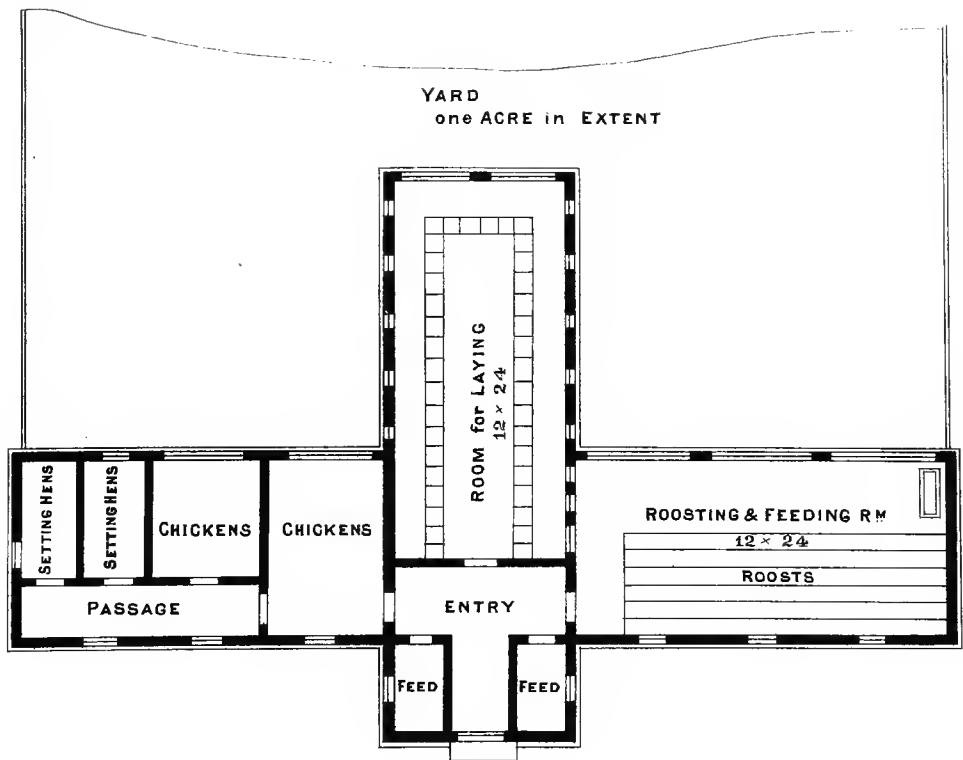
In the left wing are two rooms for chickens, and two small rooms for sitting-hens, which should be provided with nests, water, etc.

There are two chimneys in this building and a large ventilator on the roof.

AN EXTENSIVE POULTRY HOUSE.



PERSPECTIVE VIEW



PLAN

SECTION SECOND.

Plate No. 38.

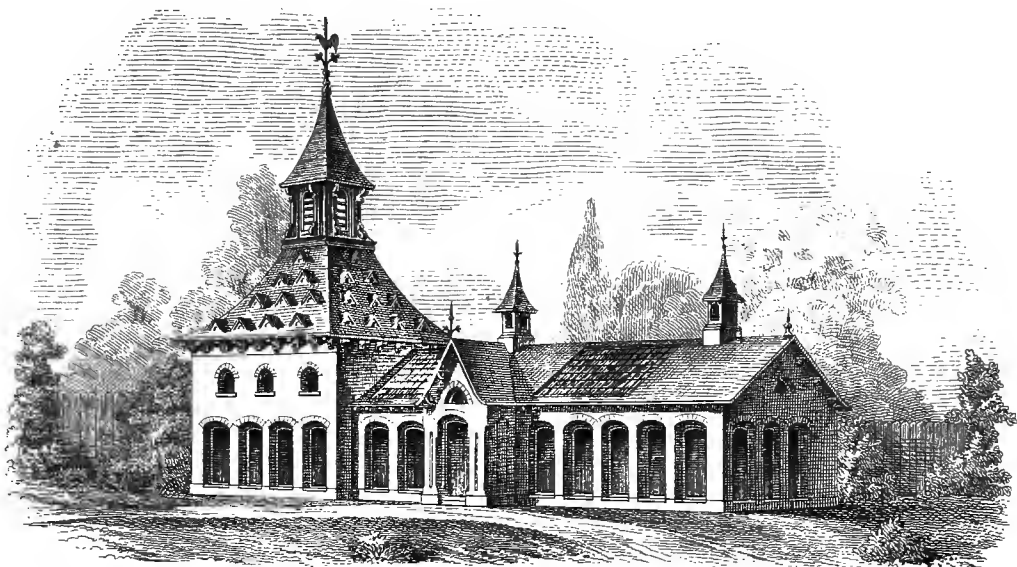
AN ORNAMENTAL POULTRY-HOUSE.

THIS design for an ornamental poultry-house was made for a gentleman in Garrison's a few years since.

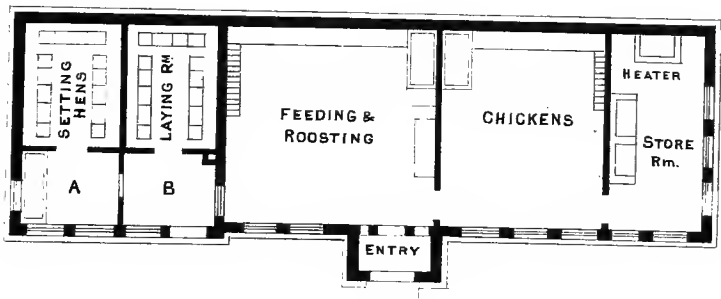
It is designed to be of brick with a slated roof, and with the front, facing towards the south, nearly all of glass. There is a sort of tower on the left, with a pigeon-house in the upper part. The floors are concrete, finished off with cement. The heater is under ground, in the right hand room, and the flue for smoke passes under the floor and terminates in a chimney on the extreme left. There is a room for chickens, provided with boxes, etc., and next it a room for feeding and roosting.

In the tower are rooms for sitting hens and laying hens, and over these rooms are other roosts. There are troughs for water, boxes for feed, and other boxes for oyster-shells, ashes, etc., conveniently placed in the several rooms.

AN ORNAMENTAL POULTRY HOUSE.



PERSPECTIVE



PLAN

SECTION SECOND.

Plate No. 39.

A N I C E - H O U S E .

THIS is a design for a stone ice-house. It is supposed to be built partly out of ground and partly beneath, and located somewhere in a grove of trees, so as to be protected from the heat of the sun.

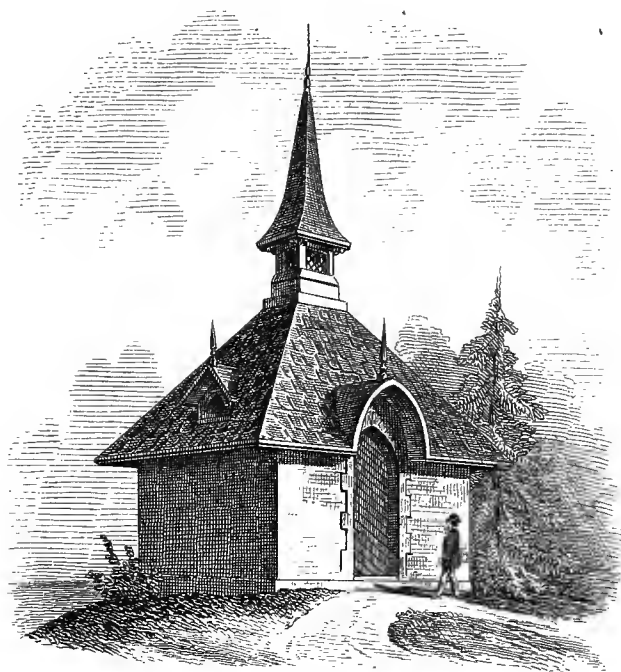
It measures twelve feet square in the clear on the inside, and eighteen feet square on the outside, and will contain about fifty tons of ice. The foundations are about ten feet below the grade of the ground, and the walls rise to a height of eight feet above it, and are covered with a steep and broadly overhanging roof. It is built with two walls, as follows: The outer wall is of stone, and twenty inches thick, laid in cement-mortar from the foundation to the plate. Inside of this wall, and eight inches from it all around, is carried up an eight-inch brick wall. This wall commences twelve inches thick, and is carried up that thickness a short distance, for the purpose of forming a ledge on which locust beams may rest to carry the floor. The walls are carried way up to the *under side* of the roof-boards and there tightly pointed, so that the eight-inch space is a space of dead air.

On the line of the plate the ice-house is tightly ceiled over and then covered with a layer of tan or sawdust about a foot thick, and the space above is well-ventilated.

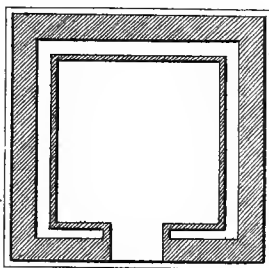
The bottom of the ice-house is dug out as much as practicable, and then filled up level, and close to the proposed floor, with small cobble-stones, so that through these there may be ample drainage. Then the locust beams are placed on the ledges before spoken of, and covered with a loose plank floor made of narrow and thick plank, and on this the ice may be packed.

The doors are made double, and both perfectly tight. One is hung on the inside edge of the wall, and the other on the outside edge, and both have strong fastenings and hinges. It will be well to have the inner door made in two lengths, so that when the ice-house is nearly full only the upper part may be exposed to the air, when ice is being removed.

AN ICE HOUSE.



PERSPECTIVE



PLAN

16 Feet to one Inch

SECTION SECOND.

Plate No. 40.

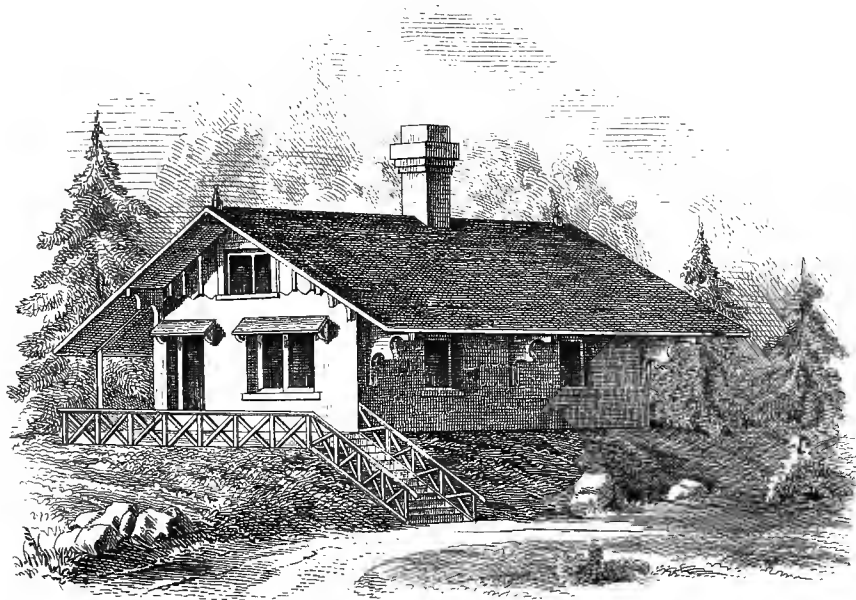
A SWISS FARM-HOUSE.

THIS picture represents a rough stone farm-house, designed after the manner of a Swiss Chalet.

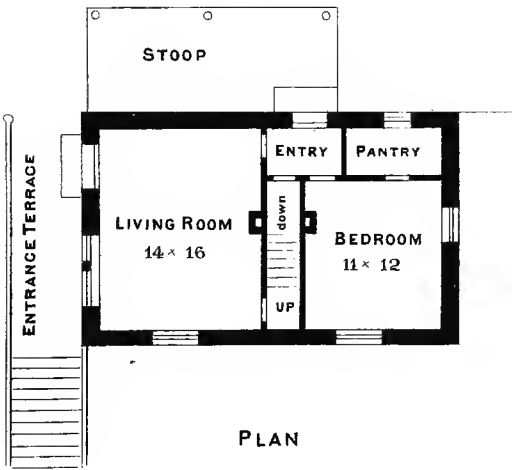
The walls are low, and built in the roughest manner of common stones, picked up here and there on the side of the hill where it is located. The roof is broad, and the eaves project some six feet beyond the walls, and are supported on very heavy brackets made of plank and joists. The entrance being some feet above the path along the front, is reached by a flight of rough steps, guarded by a rustic balustrade or railing made of rough cedar sticks. On the upper side is a stoop with a gravel floor, and a roof formed by a continuation of the main roof and supported on cedar posts. The main door opens directly into the living-room, which is a pleasant room, measuring fourteen feet by sixteen. There is a side entry four feet wide opening out upon the stoop, and also into a bed-room, eleven feet by twelve. Connected with this bed-room is a pantry or closet, and between the bed-room and living-room is a stairway to the attic. The cellar stairs are under these.

The attics have two bed-rooms finished off, and the cellar has a milk-room and a coal-room.

A SWISS FARM HOUSE.



PERSPECTIVE



PLAN

SECTION SECOND.

Plate No. 41.

A BILLIARD-HOUSE.

THIS little building was designed for a billiard-house on a gentleman's place near Newburgh.

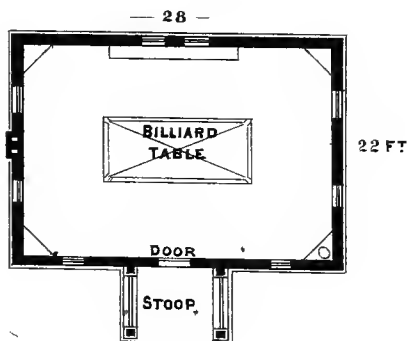
It is of brick on a stone foundation, and has an ornamental slated roof surmounted by a large sky-light. The walls are eight inches thick, and ten feet high to the wall-plate. In the centre of the front is an ornamental portico which shields the front entrance, and which in winter may be entirely enclosed by a storm-casing.

The room inside measures twenty by twenty-six feet, and is nine feet high to the cornice and sixteen feet high in the centre. The walls are furred off and plastered and tinted. There is a floor of Southern pine and black walnut laid in patterns, and a wainscoting of Southern pine with base and cap of walnut. The window and door trimmings are of the same. The roof is finished with ornamental rafters and tracery, and ceiled up with narrow ceiling, the rafters being stained dark and the ceiling simply shellacked. The skylight is neatly finished, and has ventilating windows regulated by ropes from below. In each of the four corners there are neat corner cupboards, one of which is for a wash-bowl, one for billiard-cues, balls, etc., and two for coats. The billiard-table is in the centre of the room, and has ample space all around it for players.

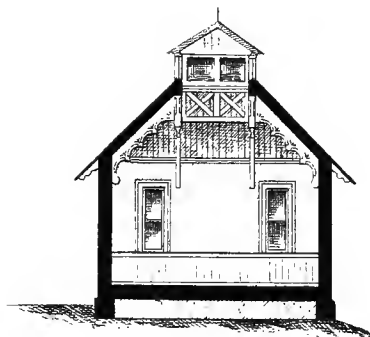
A BILLIARD HOUSE.



PERSPECTIVE



PLAN



SECTION

SECTION THIRD.



GATES, GATEWAYS, AND FENCES.

SECTION THIRD.

Plate No. 42.

SIX DESIGNS FOR FINISHED FENCES.

ON this plate we represent half a dozen designs for finished fences.

No. 1 has a boxed post fourteen inches square, made of inch and a quarter or inch and a half pine plank, secured to a locust post, which is set three and a half feet in the ground.

The fence is about five feet high, and is made of plank strips about eight inches wide, the outsides of which are sawed to a pattern, and placed about an inch apart, and secured at the top and bottom by string-pieces, with a moulding on the outside near the bottom, and a heavy cap on the top. The work is all neatly planed, and the whole should be painted and sanded.

No. 2 has a stone post about two feet square, and a stone base two and a half feet high, set three and a half feet in the ground. The sill is of pine, four by twelve-inch stuff, beveled on top, and the fence itself above this is similarly made to No. 1.

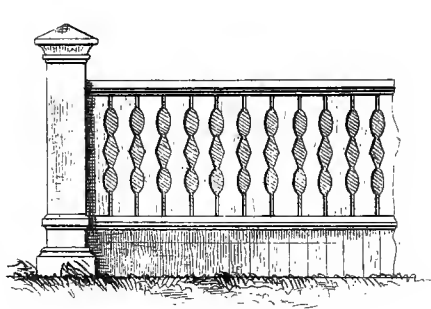
No. 3 is a tight board fence made of tongued and grooved plank, put together with white lead in the joints. It has a moulded base about twelve inches high, and a heavy cap covering the top edges. Just below the cap a scroll-work, sawed out of inch and a half stuff, is planted on the face, and under this is a heavy belt-moulding.

No. 4 has a cased post and a wooden tight bottom about two feet high, and on this is put an iron railing which is screwed fast to both, and to locust posts put at intervals of about seven feet—or braced by iron rods to dwarf posts set inside the fence.

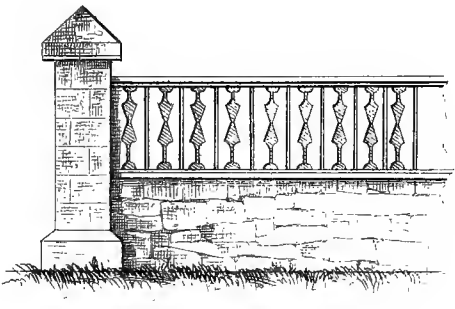
No. 5 is similar to No. 1, except that the strips are only five inches wide, and are set only about one-quarter to one-third of an inch apart, and the sawing is all near the top.

No. 6 has a tight board-bottom, and above it open pickets of four-inch stuff, placed four inches apart, and the tops sawed in a trefoil pattern.

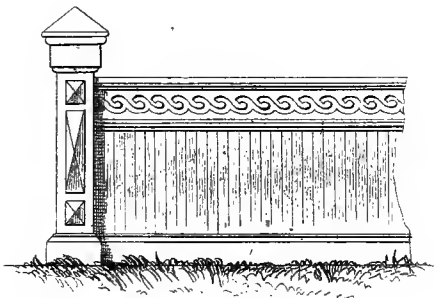
FINISHED FENCES.



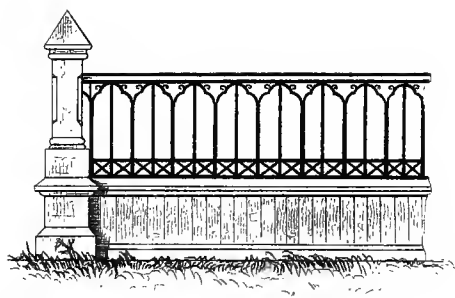
1



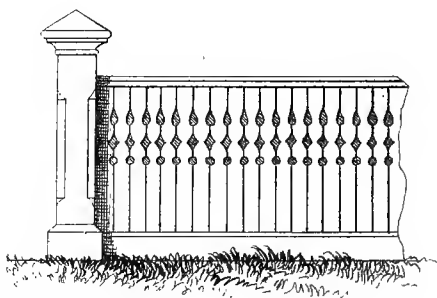
2



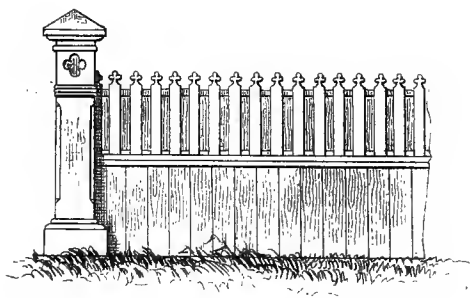
3



4



5



6

SECTION THIRD.

Plate No. 43.

SIX IRON AND STONE FENCES.

THIS plate shows some designs for iron fences with stone posts and stone bases, or dwarf walls.

They are suitable for enclosures on the public streets of large towns, but hardly appropriate for the country, both on account of their greater cost, and because they have an artificial, finished appearance, that does not accord well with the country.

The great fault, generally, with iron fences, even in the city, is that they are too elaborate altogether ; too highly wrought with figures and carvings, in imitation of what might be done in some other material, but never properly in iron.

An iron fence should be substantial and strong, carrying with it an idea of protection, yet should be light and unobtrusive, and neat withal.

Design No. 1 has a stone post and a stone base, twenty inches wide at the ground and two and a half feet high, battering up to nothing at the top, and surmounted by a single rod of iron with uprights at frequent intervals to support it. The bevels of the stone-work are all hammer-dressed, but the vertical faces are left rough. This fence is very simple, and would answer for an enclosure to a church-yard.

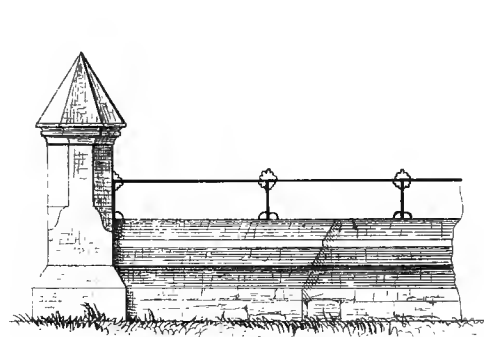
No. 2 has a more elaborate post which, with the base, might be of brown stone, as the carving could be more easily executed in that material than in any harder stone. The base is about eighteen inches high, with a saddle-back top and a rough face, and the iron-work is light and open,—may be made of gas-pipe.

No. 3 is quite elaborate, and Nos. 4 and 6 rather plain. The posts of all these should be of brown stone.

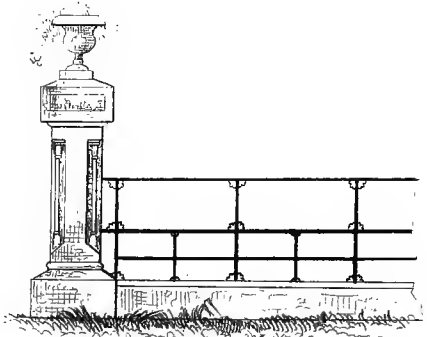
No. 5 has a heavy split granite post, and a rough rubble stone dwarf wall, coped with a dressed stone, and surmounted by a low iron railing.

The foundations of all these fences should be set from three and a half to four feet below the surface of the ground, to prevent any possibility of their being thrown by the frost, as nothing can look worse than to see a fence or wall tipped over at all sorts of angles with the ground, owing to a lack of proper depth of base-course or foundation.

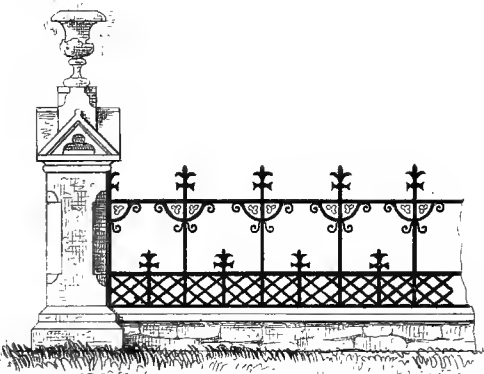
IRON AND STONE FENCES.



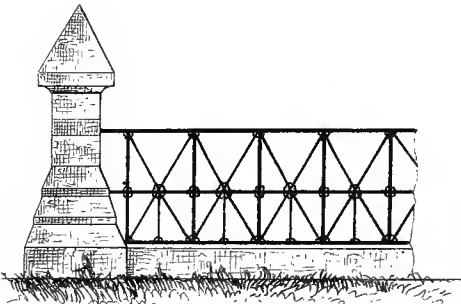
1



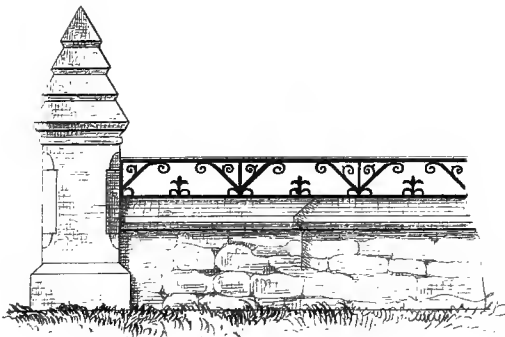
2



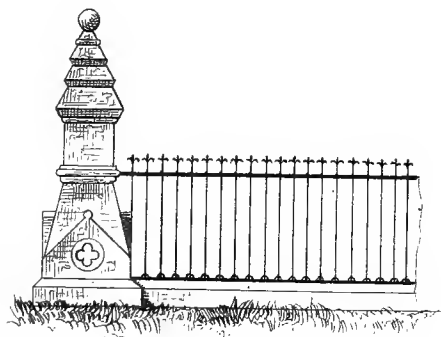
3



4



5



6

SECTION THIRD.

Plate No. 44.

SIX RUSTIC FENCES.

Our designs for fences would hardly be complete without a few suggestions in the way of rustic fences; accordingly, on this plate we exhibit half a dozen examples of them in their more simple and easily constructed forms.

Designs of this sort may be varied almost to infinity, according to the taste of the workman and the materials with which he has to work. A skillful person, in a ramble of a couple of hours in the woods, may pick up hundreds of different kinds of twists and crooks, all of which he may make use of, and by the exercise of a little ingenuity in the combination of these crooked pieces with straight ones, he may work up a very pretty design. In building a run of, say a hundred feet, he may make the different sections all dissimilar, and by dividing each section into a number of smaller panels, as shown in the second figure of Plate 44, he may make a very great variety of pretty patterns. This figure shows a section of about eight feet, divided into four panels. Straight pieces are used for strength, and the filling up is of the crooked stuff.

The heavy posts which divide the sections should be from six to eight feet apart—not over eight—and should be set from three and a half to four feet in the ground; and it would be well to char the ends, as by so doing the possibilities are that the posts will last longer than if not.

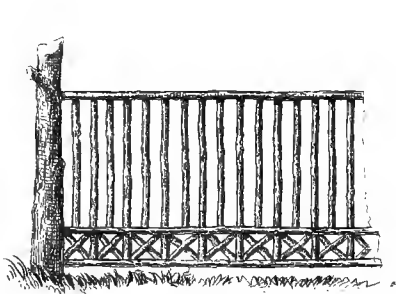
Red cedar is the best material, though sometimes white oak, and sometimes locust is used.

Designs Nos. 1, 3 and 5, all have solid posts made of trunks of cedar trees.

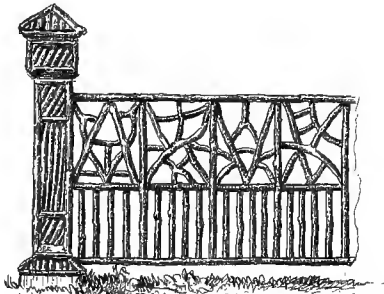
Nos. 2 and 4 have cedar or locusts posts boxed out with rough boards, and then covered over with strips of small stuff split, and the flat side nailed to the boxing.

No. 6 has a very rough stone post, and a dwarf wall sixteen inches thick, coped with a rough blue stone coping, and surmounted by rustic work secured by iron fastenings.

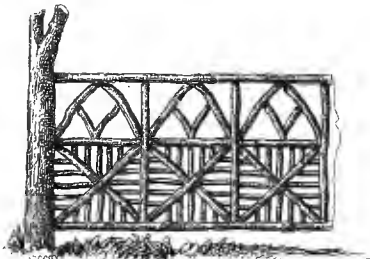
RUSTIC FENCES.



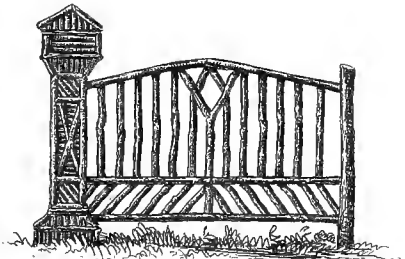
1



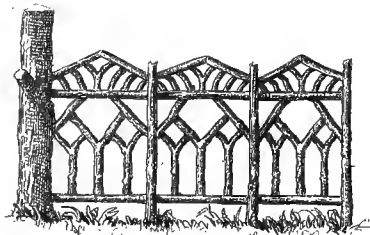
2



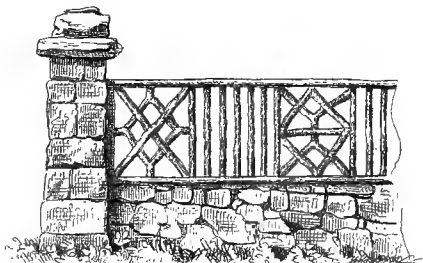
3



4



5



6

SECTION THIRD.

Plate No. 45.

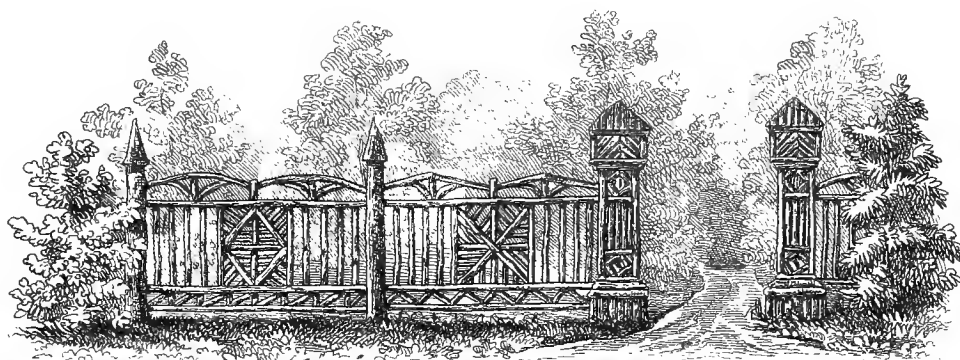
TWO RUSTIC GATEWAYS.

PLATE No. 45 represents two designs for rustic gate-ways.

No. 1 is a small gate-way and two sections of a rustic fence, slightly differing from each other in design, and constructed in a similar manner to those on the last plate.

No. 2 is a carriage gate-way, suitable for an entrance to a gentleman's place. The gate-house is seen on the right, just within the fence. The central part, for carriages, is twelve feet wide, and the gates are in two parts. The smaller ones are four feet wide each. That one on the left may be made stationary, it having been introduced only for the purpose of giving a balance to the different parts of the design.

RUSTIC GATEWAYS.



1



2

SECTION THIRD.

Plate No. 46.

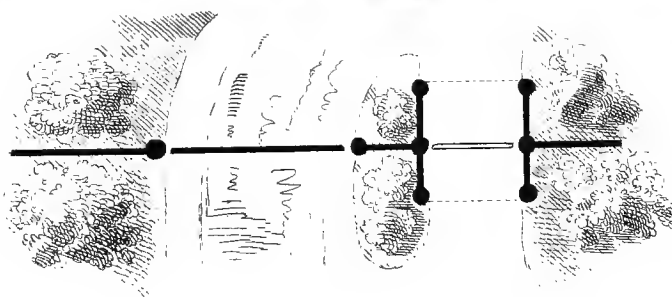
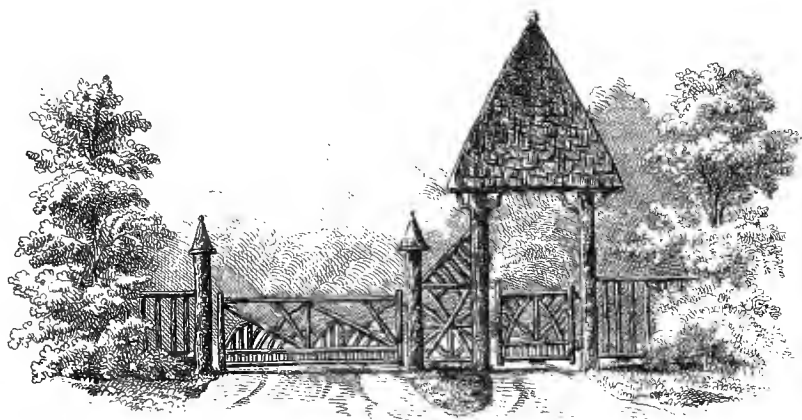
TWO RUSTIC GATEWAYS.

THIS plate shows two other designs for rustic gate-ways.

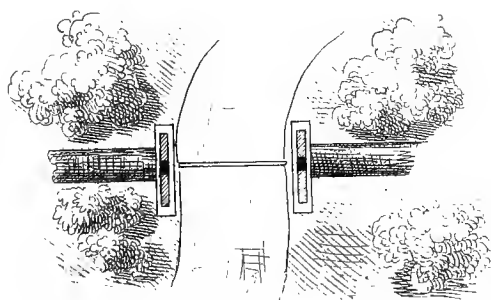
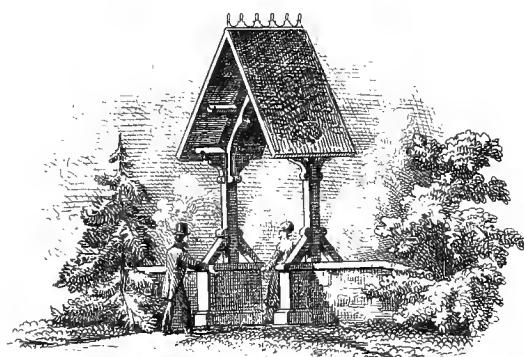
No. 1 is a single carriage gate ten feet wide, with a smaller hooded gate at the side of it. All are made of red cedar, except that the hood of the small gate is first boarded over with rough boards and then covered with bark, nailed on.

No. 2 is a small gate-way through a stone wall, suitable for a church-yard gate. This is made of sawed stuff. The posts are seven or eight inches square, and the roof is supported on heavy sawed brackets, and covered with bark in the same manner as No. 1.

RUSTIC GATEWAYS.



1



2

SECTION THIRD.

Plate No. 47.

THREE CARRIAGE GATEWAYS.

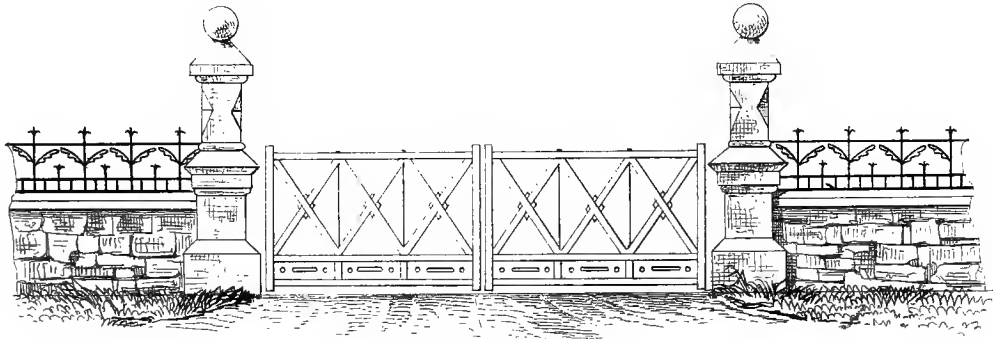
PLATE No. 47 exhibits three designs for finished carriage gate-ways, and sections of the adjoining fences.

No. 1 has stone posts and stone dwarf walls coped with flat flagging, and surmounted by an iron railing similar to some of those on Plate No. 43.

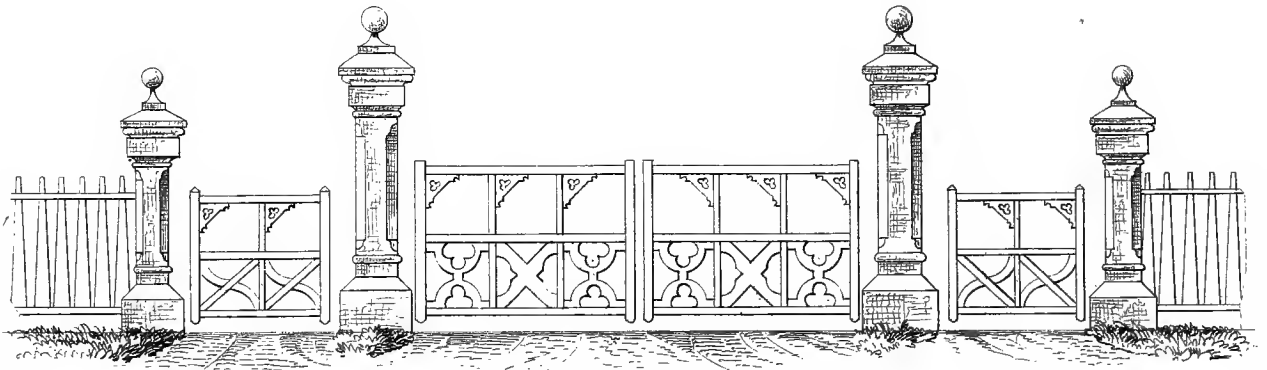
No. 2 is a gate-way recently put up on the same place in Newburgh as the stable shown on Plate No. 11. There are four locust posts boxed with plank, and moulded with heavy mouldings. The large gate-way is twelve feet wide, made of three by four-inch stuff, braced and bracketed with two-inch stuff. The smaller gate-ways are four feet wide, and the gate on the left is stationary. The pickets are four feet long, five inches broad at the bottom and two at the top, and rest on top of a base board. The gates stand back about thirty feet from the front line, and are connected with the main fence by two quarter-circle sweeps, making a clear space or recess of about thirty by eighty feet, which adds much to the appearance of the entrance, besides giving space to turn round in, clear of the public road.

Design No. 3 has dressed and moulded brown stone posts and heavy gates braced with iron and ornamented with sawed work, and having heavy ornamental strap-hinges. The fence is composed of three-inch rails and four-inch posts, made of hard wood and chamfered.

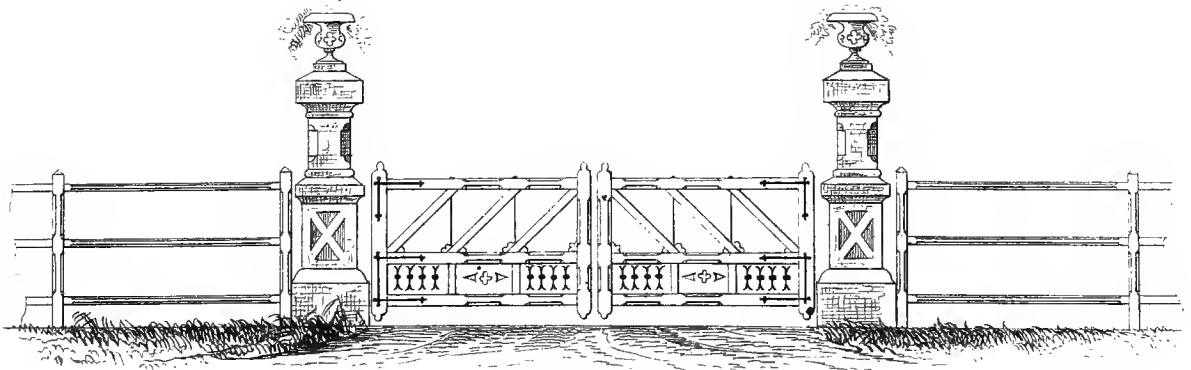
CARRIAGE GATEWAYS.



1



2



3

SECTION THIRD.

Plate No. 48.

SIX SINGLE GATES.

THIS plate illustrates six designs for small single gates. They are all the same size, being four feet in width and three feet and four inches high. They are all designed to be made of pine, the frames of two-and-a-quarter by three-and-a-quarter or three-and-a-half-inch stuff, and the inner braces, etc., of two-inch stuff.

No. 1 has curved braces and iron tightening-rods.

No. 2 is a plain design, made with straight-framed braces and sawed work beneath.

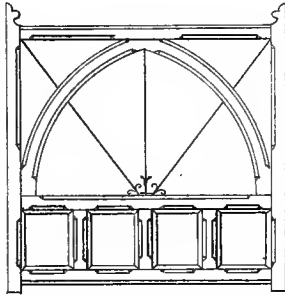
No. 3 is strengthened by iron rods, and has sawed work in the lower part.

No. 4 has twisted dwarf columns above, and below the cross-rail is ceiled up, and has ornamental one-and-a-quarter-inch braces planted on each side.

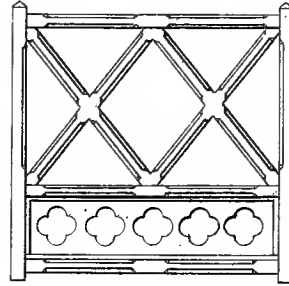
No. 5 is all framed together, and is the most expensive design of the set.

No. 6 has sawed balusters and angle brackets.

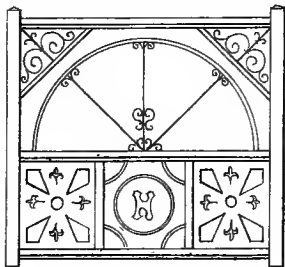
SINGLE GATES.



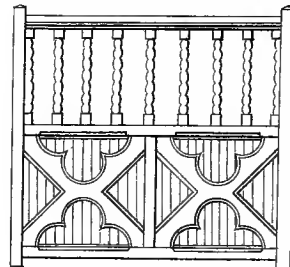
1



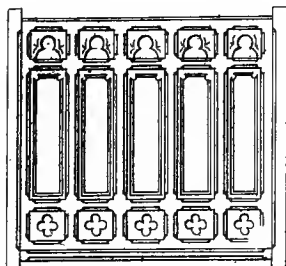
2



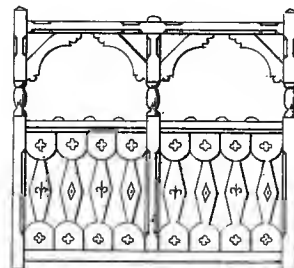
3



4



5



6

SECTION THIRD.

Plate No. 49.

A STONE GATE-HOUSE.

AN arrangement like the one shown on this plate, always serves to give character to a gentleman's country place, besides being a great convenience to the persons whose duty is to open and shut the gates.

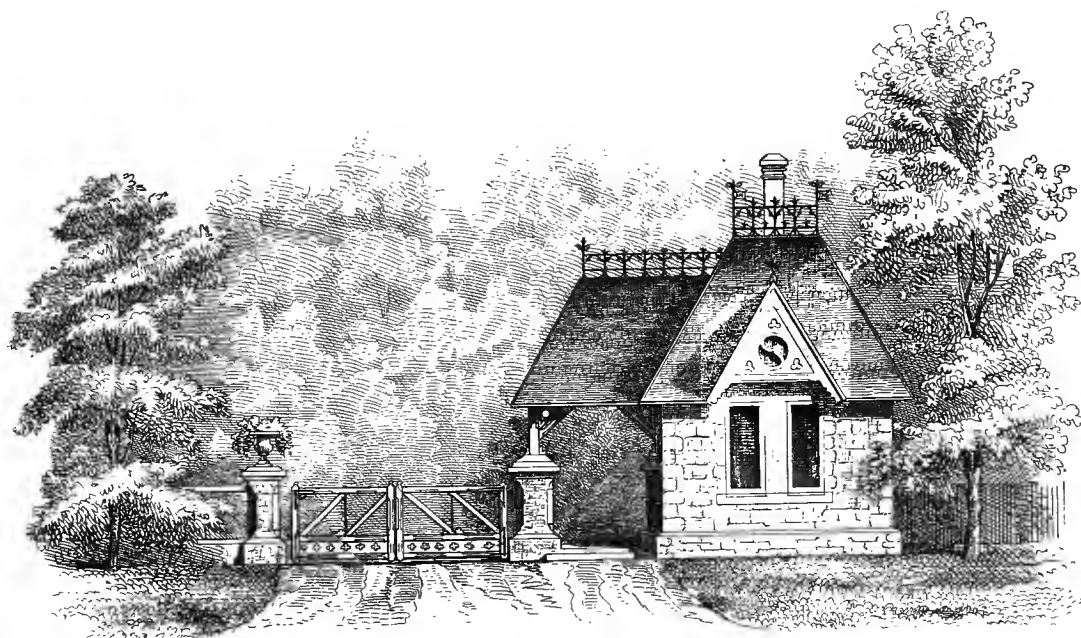
The house itself is a small, low-walled building, constructed of rough stone, and having on the first floor a parlor, kitchen and back kitchen, and in the second story a couple of good sleeping-rooms.

The parlor and kitchen both measure eleven feet by thirteen, and the back kitchen is eight by fourteen. There are stairs to the second story rising from the front entry, and under them a flight to the cellar. The back kitchen has a door leading to the yard.

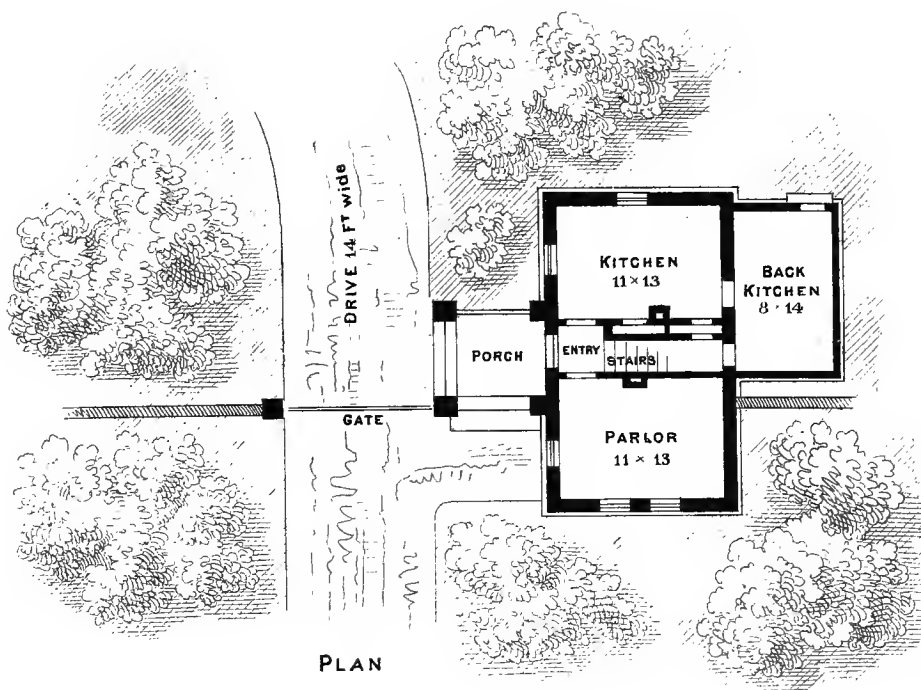
The gate-posts are of dressed stone, and the right hand one forms a base for one of the columns of the porch at the entrance, there being another similar post under the corresponding column of the porch. The passage-way for persons walking is under this porch, there being a small gate hung there — not shown in the picture, however. The main gates are of wood braced with iron, and hung with heavy ornamental strap-hinges.

This gate-way should stand from thirty to fifty feet back from the street, and have two quarter-circle sweeps of stone wall connecting it with the main line of wall, and having heavy stone posts at the intersection surmounted with vases, like the left hand post in the picture. The whole thing should be well supported by trees and shrubbery which should be planted in heavy masses all around it, and partially hide it from view. A couple of large elms or maples, planted just outside the wall, one on each side, would add still more to the effect.

A STONE GATE HOUSE.



ELEVATION



SECTION THIRD.

Plate No. 50.

SIX RUSTIC STRUCTURES.

OUR last plate of designs shows some rustic structures which may be very easily made of red cedar or white oak.

No. 1 is a pump-house, which is built directly upon the platform which covers the well and surrounds the pump. There are four posts made of trees, surmounted by a hipped roof covered with bark or thatch.

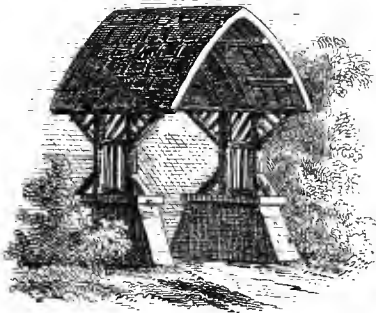
No. 2 is a covering for a well made in the same manner.

No. 3 is an opening or passage-way in a stone wall covered with a roof; very suitable for an entrance to a small country place, or for a church-yard gate.

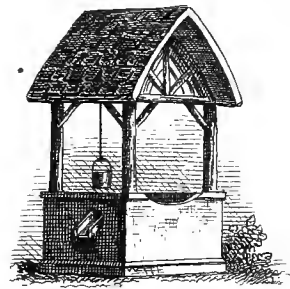
No. 4 is a hood for a window or door, such as might be used with advantage on any small and cheap cottage.

No. 5 is a summer-house table, and No. 6 is a garden-sofa made of rustic work.

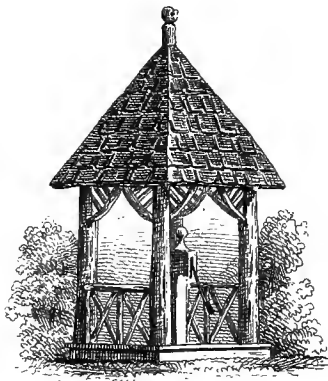
RUSTIC STRUCTURES.



1



2



3



4



5



6

S U P P L E M E N T .

Plates Nos. 51 to 62.

STABLE FITTINGS.

IN the twelve Plates which follow, we have introduced a number of examples of the improved Stable Fittings, together with some illustrations of Stall and Boxes, all completely fitted up after the most approved manner.

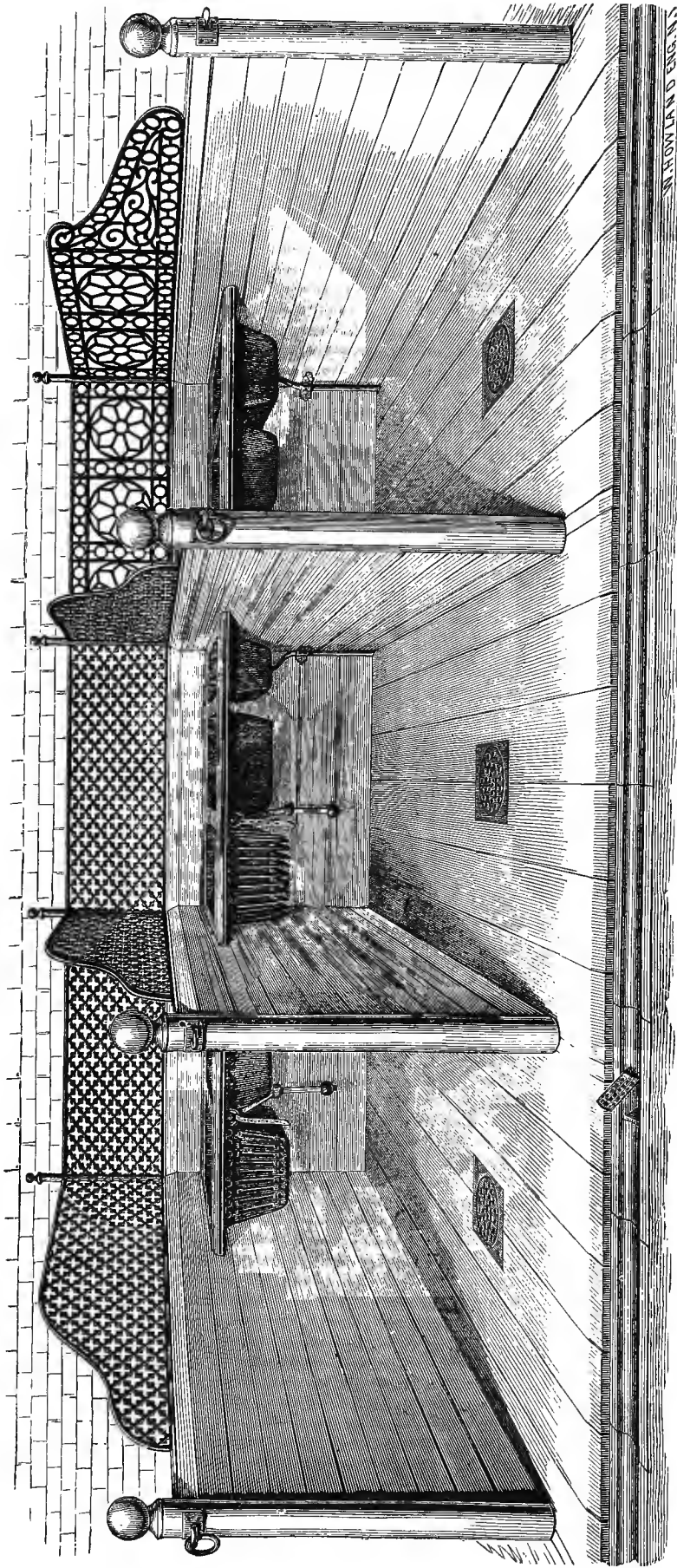
They have been selected from the extensive Catalogue of James L. Jackson & Bro., East 28th and 29th Streets and 2d Avenue, New York, who have allowed the use of them in this work.

Plates 51, 52 and 53, represent ranges of stalls and boxes, showing the iron feed and water boxes, the iron partition guards, and the gutter running along behind the stalls.

Plates 54, 55 and 56, show the guards on a larger scale, and in a number of different patterns.

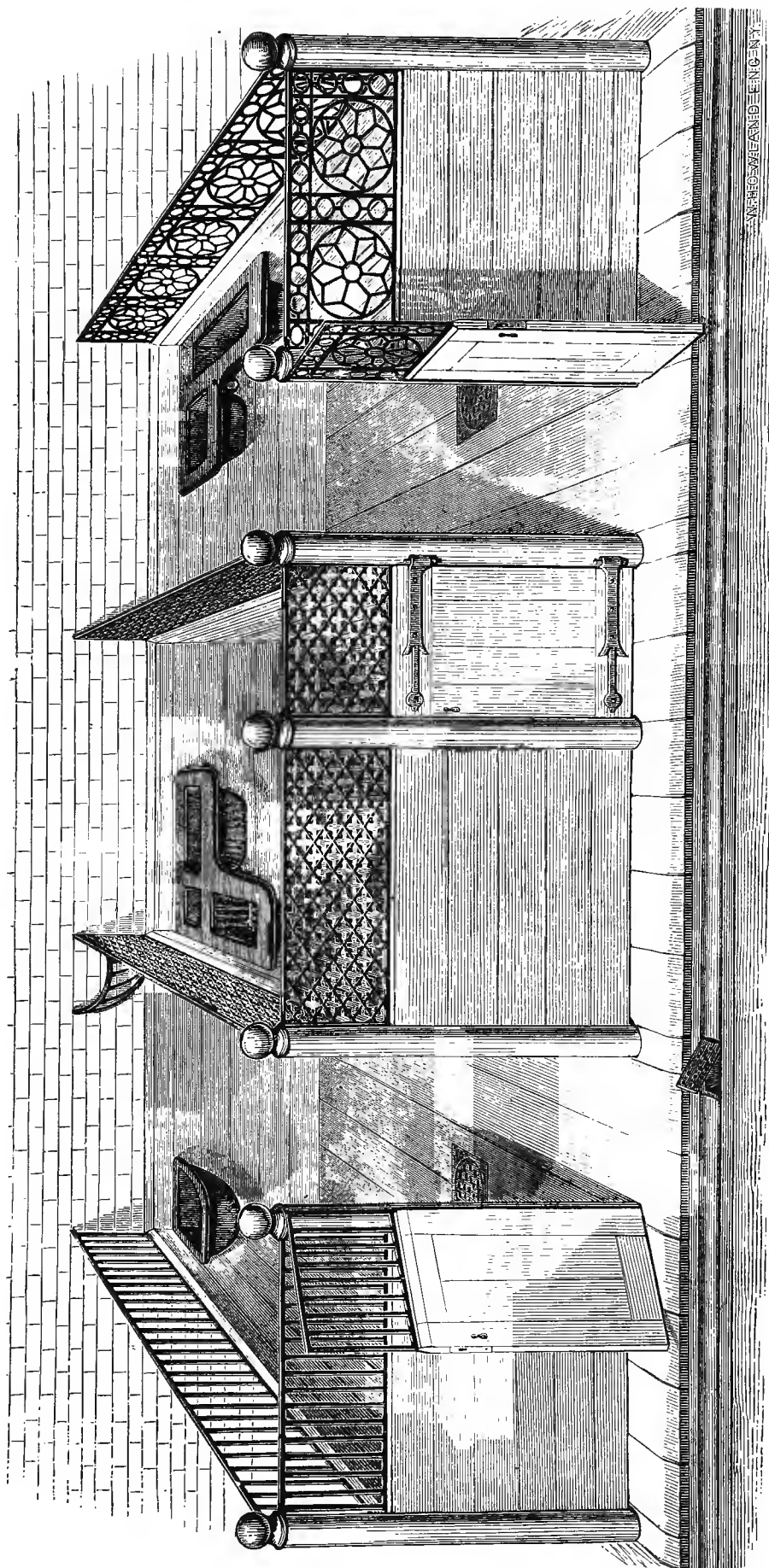
On plates 57, 58, 59 and 60, are several different kinds of mangers, racks, brackets, ventilators, gutters, &c., and, on plate 61 is shown a new method of hanging up harnesses in a cupboard or against a wall.

Plate 62 shows four designs for iron-window guards, suitable for stable windows.



DESIGN FOR A RANGE OF STALLS.

Each Stall measures from 9ft. to 9ft. 6 in. long, and 4 ft. 6 in. wide, and 6 ft. to 7 ft. high. On the left of drawing is shown the Lattice Pattern, Stall Guard, and on the right of same is shown the Long Star Guard. The Posts at end of stall divisions are of wood or iron. At the head of stall is shown both the Lattice and Star pattern of railings, more particularly used where a passage way runs between the head of the stall and the brick wall.

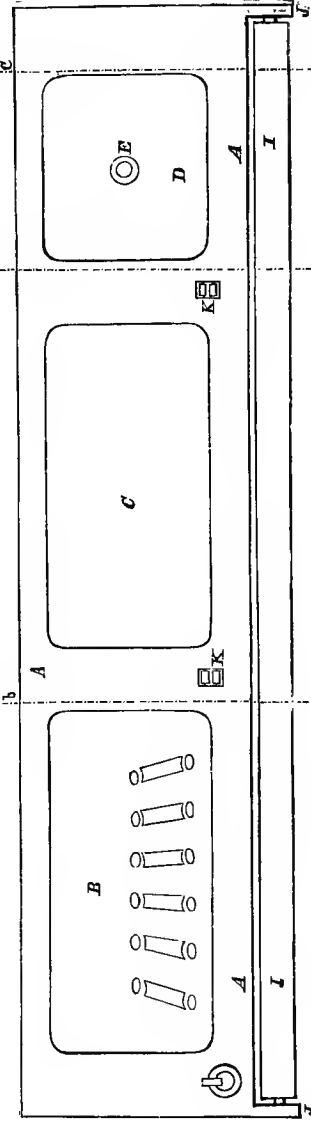
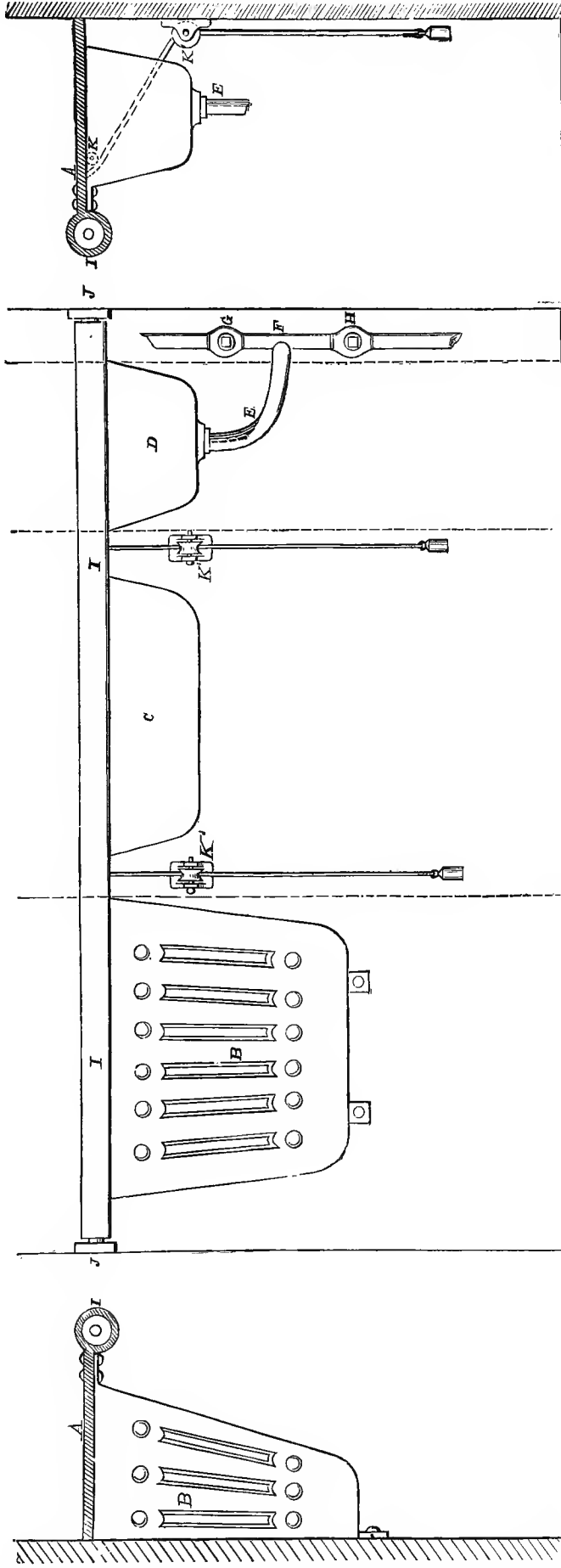


DESIGN FOR RANGE OF LOOSE BOX STALLS.

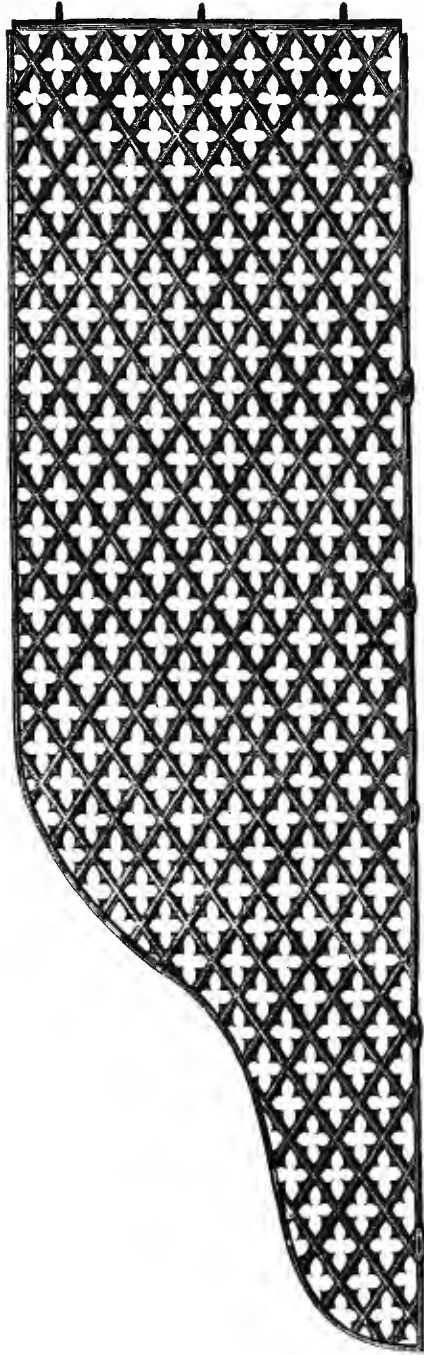
Made of various sizes, but usually 12 ft. 6 in. long, by 9 ft. wide, and 6 to 8 feet high; shown with Wrought Bar, Lattice and Star Division Railings, with Corner Oat Manger and Hay Rack; also, with Hay Box, Manger, and Water Troughs; also, Hay Box and Manger.

SUPPLEMENT.

PLATE No. 53.

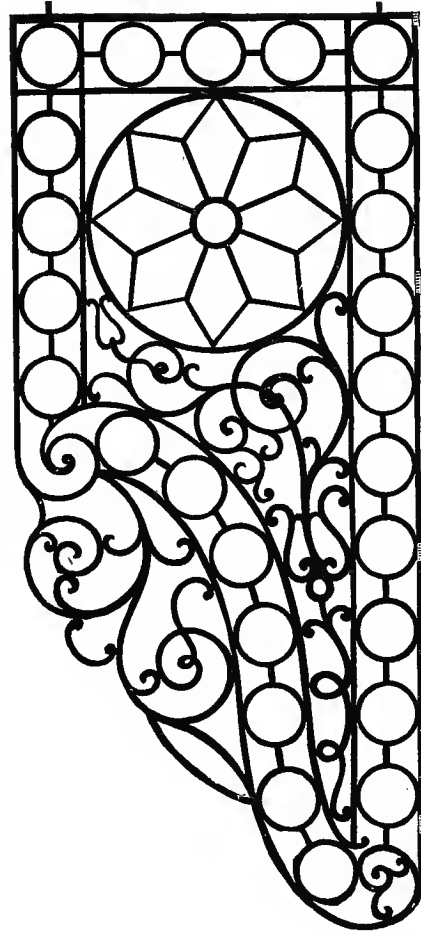


ELEVATION PLANS AND SECTIONS OF IMPROVED STABLE FITTINGS, WITH HALTER STRAP AND WEIGHT



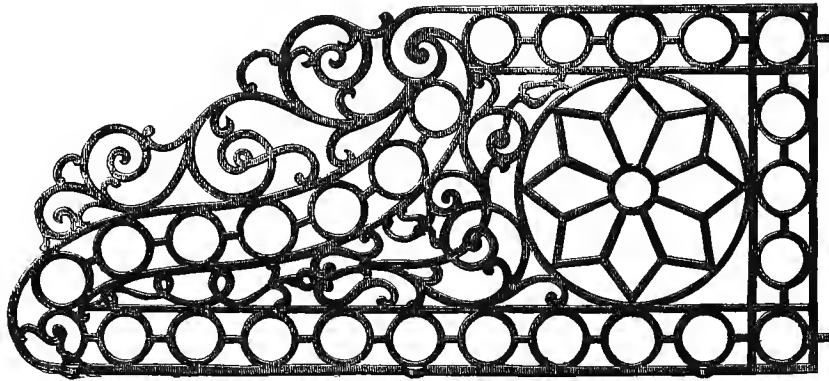
LATTICE STALL GUARD.

7 ft. 1 in. by 2 ft. 1 in. high.

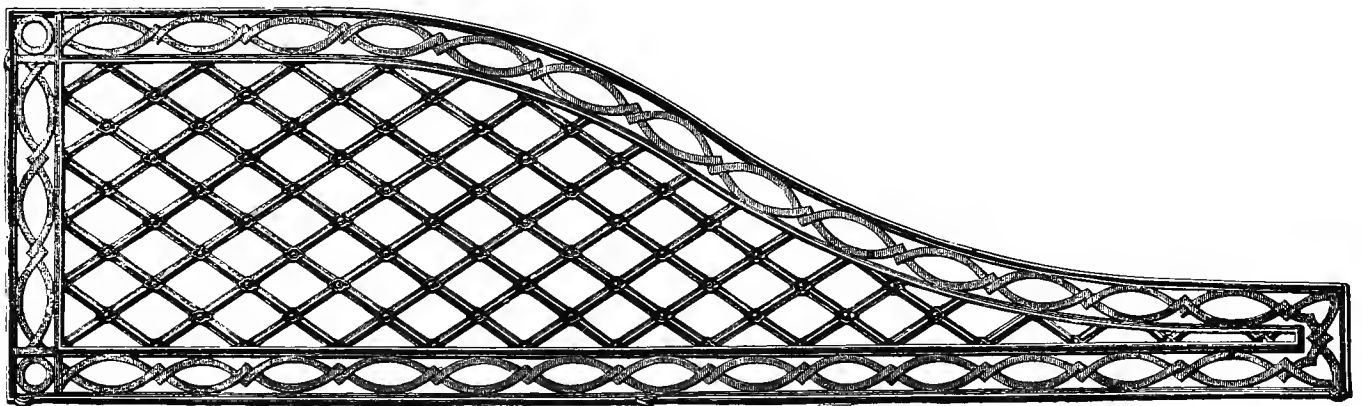


SHORT STAR STALL GUARD.

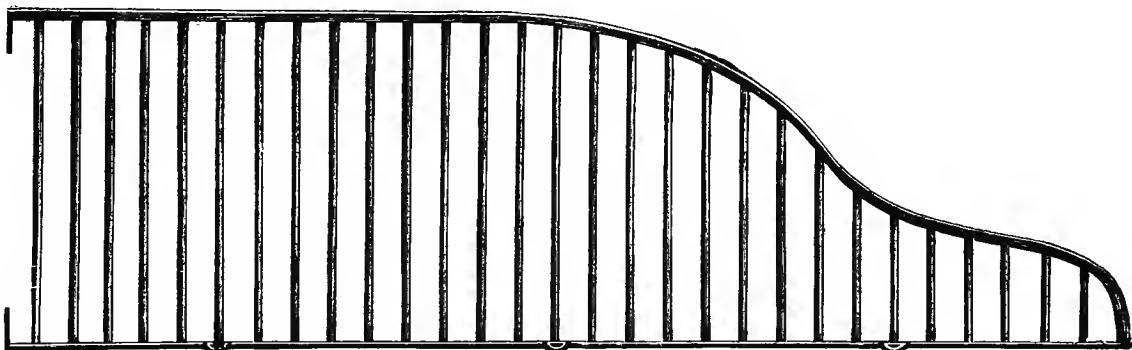
4 ft. 10 in. long, by 2 ft. 2 in. high.



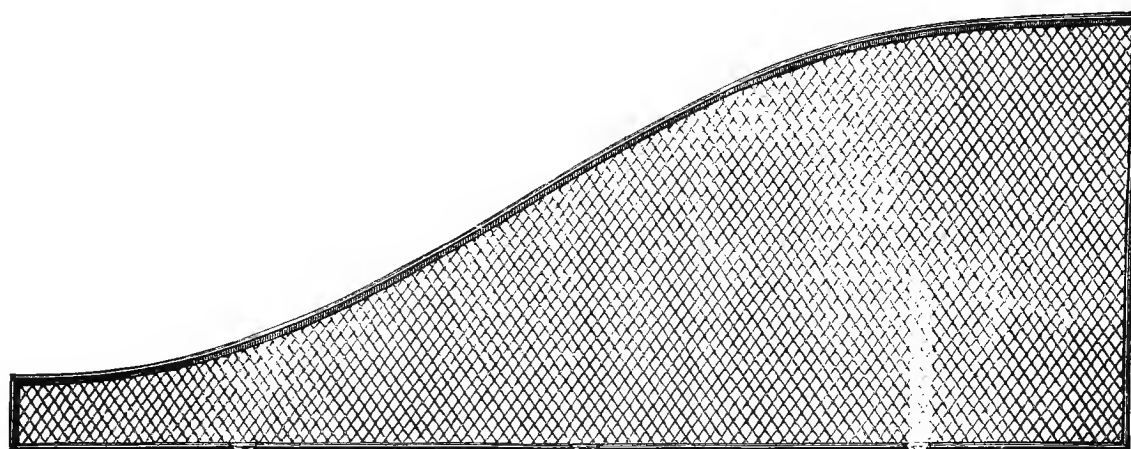
SHORT STAR STALL GUARD.
4 ft. 10 in. long, by 2 ft. 2 in. high.



SHERWOOD STALL GUARD.
7ft. 9in. long, by 2 ft. 6in. high.

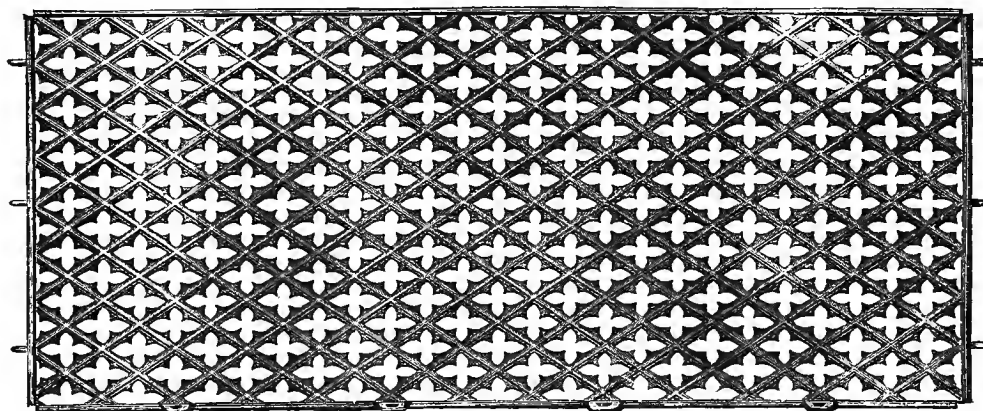


WROUGHT BAR STALL GUARD.



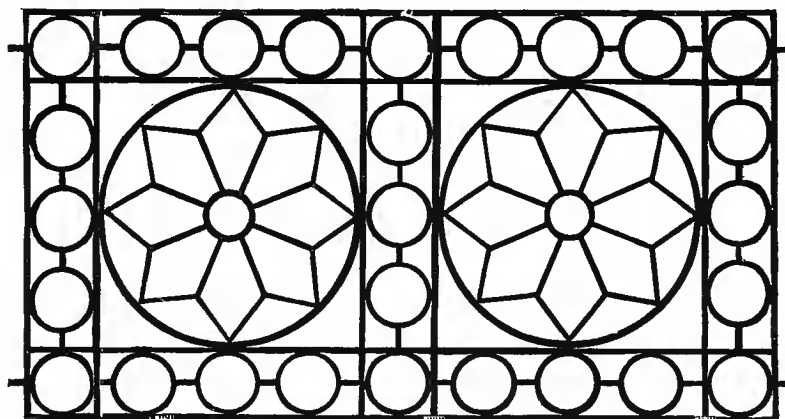
WIRE STALL GUARD.

7ft. 2 in. long, by 2 ft. 11 in. high.



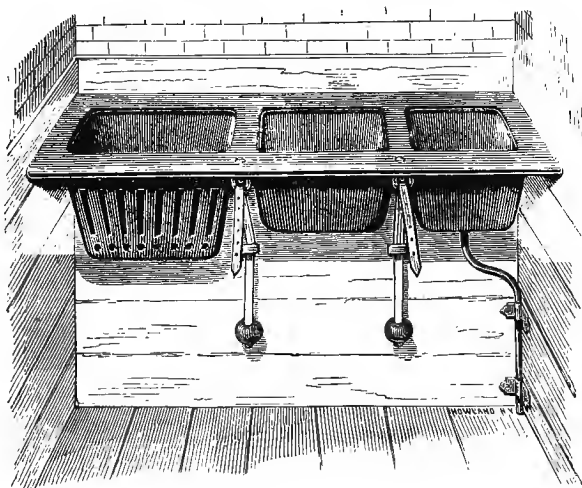
LATTICE GUARD.

For Box Stalls, and for the Ends of other Stalls. 2 ft. 2 in. high.



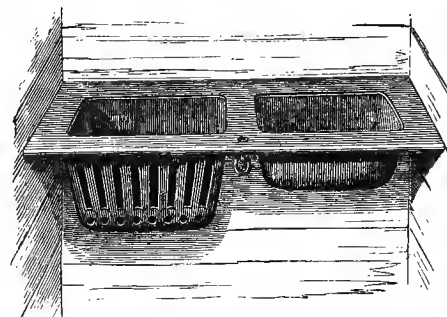
STAR GUARDS.

For Box Stalls, and for the Ends of other Stalls. 1 ft. 10 in. high.



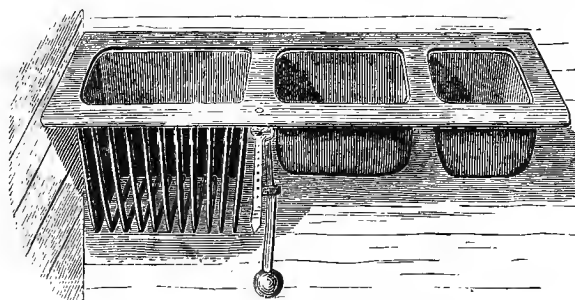
IMPROVED STABLE FITTINGS.

Consisting of Hay Box, Manger, and Water Trough, as one fixture, with round guard in front, with halter guide, and weight at back of stall. Length, 4 ft. 6 in. to 5 ft., by 1 ft. 10 in. wide.



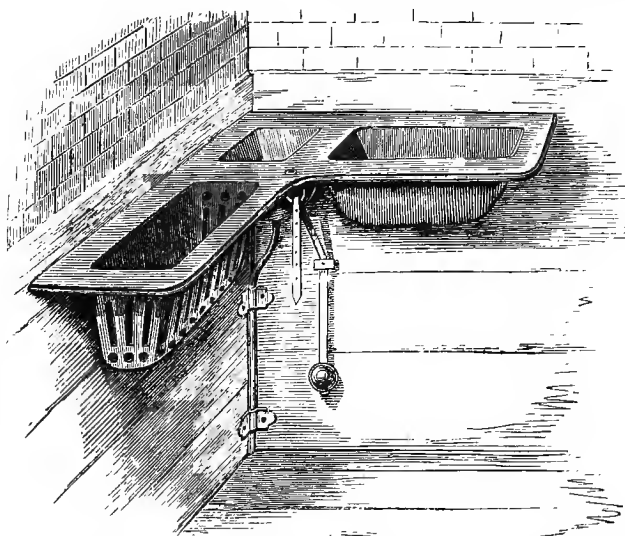
IMPROVED STABLE FITTINGS.

Consisting of Hay Box and Manger, as one fixture, with round guard in front, and improved fittings for halter guides, not shown on cut. Length, 4 ft. 0 in., to 4 ft. 6 in., by 1 ft. 10 in. wide.



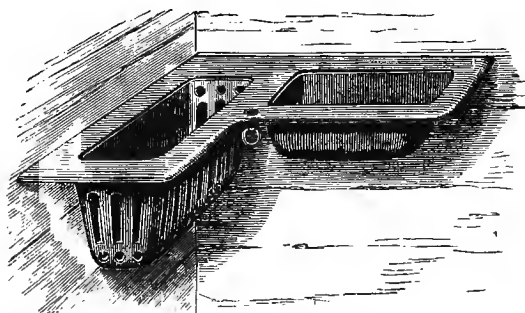
IMPROVED STABLE FITTINGS.

Consisting of Heavy Iron Hay Rack, Manger, and Water Trough, with round guard in front, as one fixture, with improved fittings for halter guide, preventing the horse from becoming entangled with the halter. Length, 4 ft. 6 in. to 5 ft. 0 in. by 1 ft. 10 in. wide.



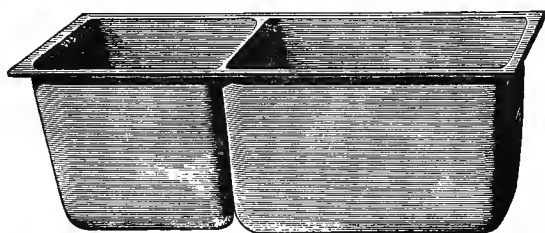
IMPROVED STABLE FITTINGS FOR BOX STALLS.

Consisting of Hay Box, Manger, and Water Trough, with round guard in front, to prevent injury to the horse, and improved halter guide.



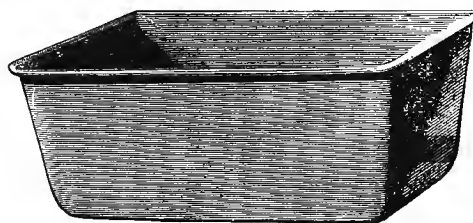
IMPROVED STABLE FITTINGS FOR BOX STALLS

Consisting of Hay Box and Manger, with round guard in front, to prevent injury to the horse, with improved halter guide, not shown on drawing. Size 3 ft. 6 in., by 2 ft. 5 in.



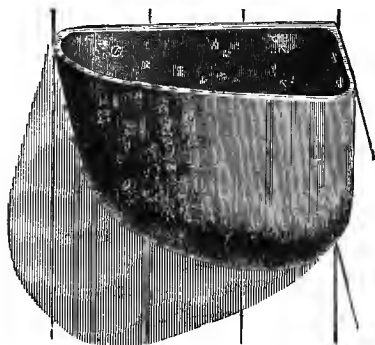
OAT MANGER AND WATER TROUGH COMBINED.

Size of Oat Manger, 16½ in. by 13½ in. by 11 in. deep. Size of Water Trough, 11 in. by 13½ in. by 11 in. deep.



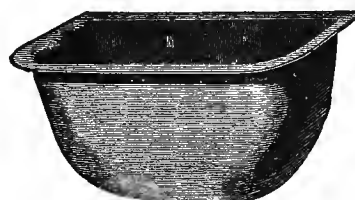
OAT MANGER.

Size 22½ in. by 14½ in. by 9½ in. deep.



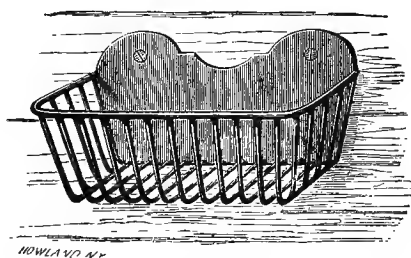
CORNER OAT MANGER.

Inside Measure, 16½ in. by 16 in. by 11½ in. deep.



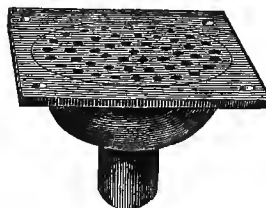
OAT MANGER.

Size, inside measure, 16½ in. long, 12 in. wide, 9½ in. deep.



WET BRUSH AND SPONGE BOXES.

14 in. by 6 in.



HEAVY CESS POOL FOR STABLES.

Size, 14 in. by 14 in.

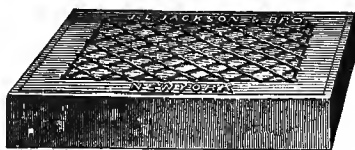


SECTION OF CESS POOL TRAP.

12 in. round.

SUPPLEMENT.

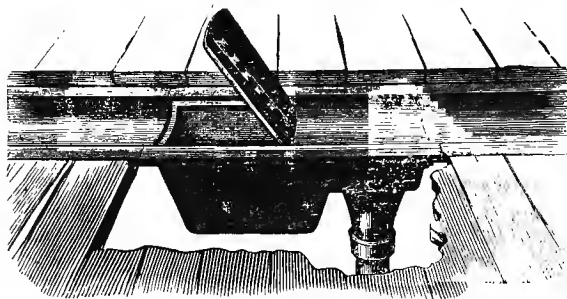
PLATE No. 59.



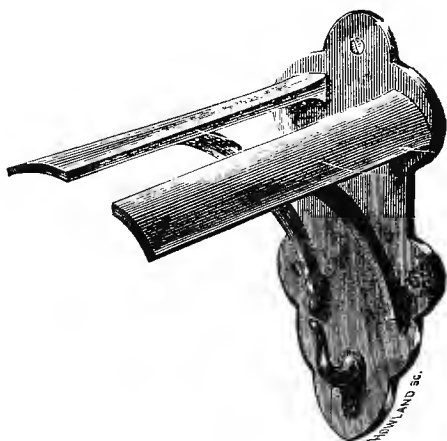
HEAVY SQUARE CESS POOL.
14 in. by 18 in., by 3 in. deep.



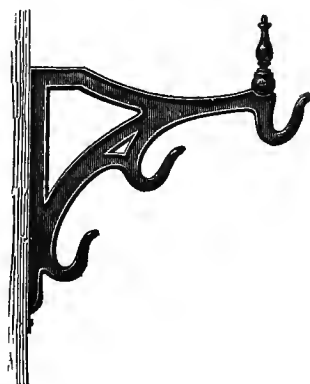
ROUND CESS POOL.
Also made as a Trap.



LARGE TRAP.



SADDLE BRACKET.



**BRACKET FOR OILING AND
WASHING HARNESS.**



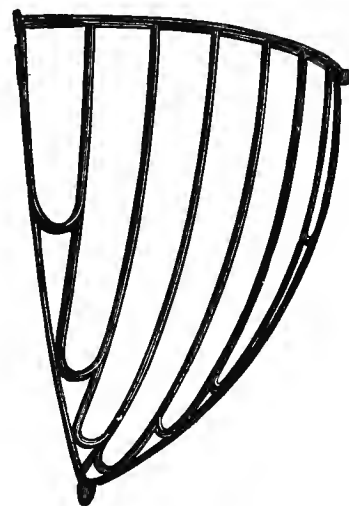
STALL POST.



DOLPHIN GUTTER LEADER.
4 in. and 5 in. diameter in clear.



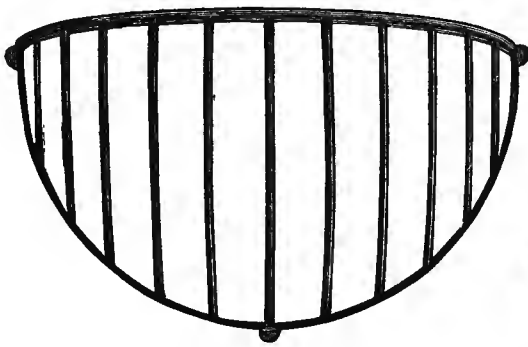
FLUTED GUTTER LEADER.
4 in., 5 in. and 6 in. diameter in clear.



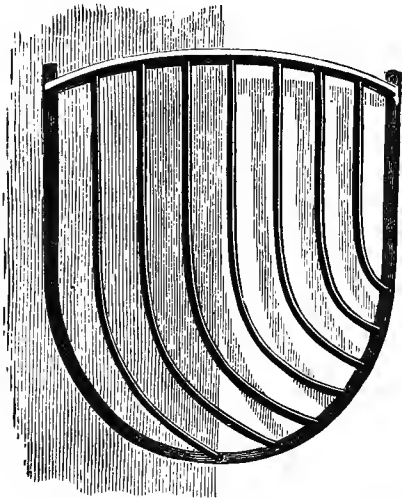
QUARTER CIRCLE HAY RACK.



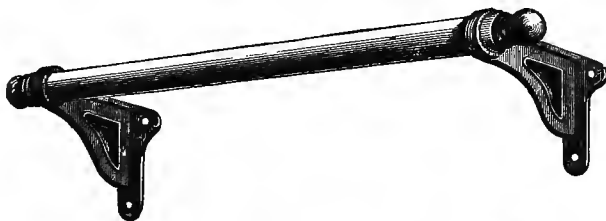
STABLE GUTTER AND TRAP.



HALF CIRCLE HAY RACK.



QUARTER CIRCLE WROUGHT-IRON HAY RACK.



BLANKET ROLLER.



HARNESS HOOKS.
Large and Small Size.



SET OF CARRIAGE POLE BRACKETS.

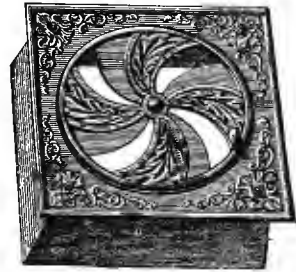


HORSE POST.



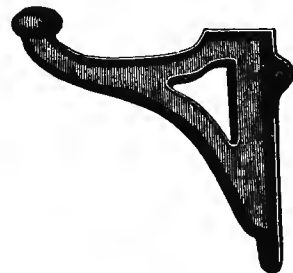
NIBBLING BAR AND SOCKET.

For wood mangers. Diameter of Bar. 3 in.

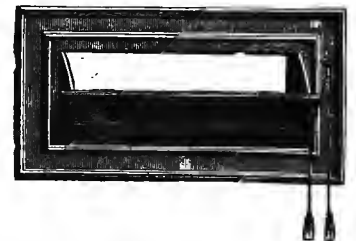


ROUND VENTILATORS.

Size, 5 in. 6 in. 8 in.
48 cts. 58 cts. 75 cts. each by dozen,



CARRIAGE POLE BRACKET.

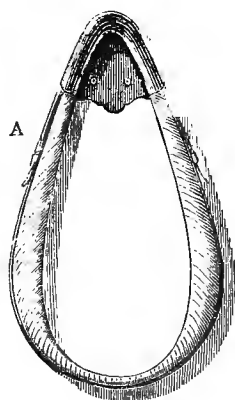


VENTILATOR,

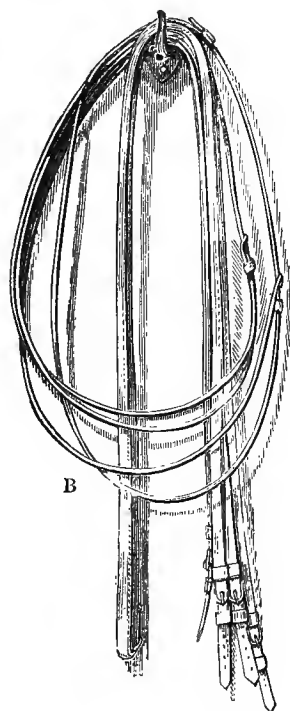
for the introduction of fresh air through an external wall,
without draft.

When the Ventilator is open, as shown, the incoming fresh air from without is diverted towards the ceiling, where it will spread on all sides and become warm, so that in its descent it will not cause the slightest draft, as the well-known fact that cold air is heavier than warm air, and descends, while the warm air ascends. It is closed and opened by a cord.

NEW METHOD OF HANGING UP HARNESS,



A



B

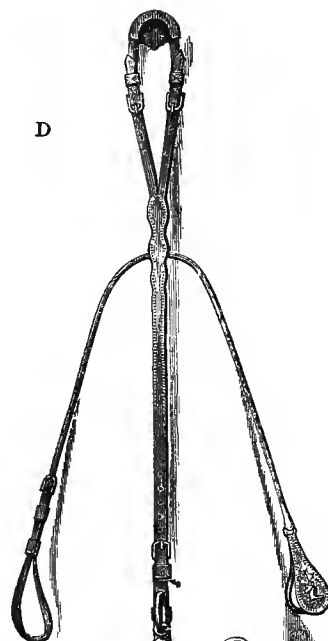


C

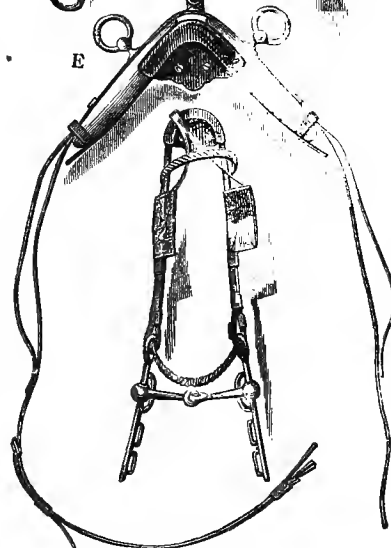
C is Bracket for hanging up Harness.



Tie Ring.



D



E

D for Hanging up Crupper.
E " Saddle.

A is Bracket for hanging up Collar
B " " Lines.

WROUGHT IRON WINDOW GUARDS, FOR STABLES & OTHER BUILDINGS.

